# COMMONWEALTH of VIRGINIA

***DEPARTMENT OF ENVIRONMENTAL QUALITY***

NORTHERN REGIONAL OFFICE

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director


**Article 3**
**Federal Operating Permit**

This permit is based upon Federal Clean Air Act acid rain permitting requirements of Title IV, federal operating permit requirements of Title V; and Chapter 80, Article 3 and Chapter 140 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13,: 10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, 9 VAC 5-80-360 through 9 VAC 5-80-700, and 9 VAC 5-140-10 through 9 VAC 5-140-900 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

| | |
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| Permittee Name: | Virginia Electric and Power Company |
| Facility Name:<br>Facility Location: | Dominion - Possum Point Power Station<br>19000 Possum Point Road<br>Dumfries, Virginia |
| VA Registration Number:<br>Permit Number: | 70225<br>NRO70225 |

This permit includes the following programs:

**Federally Enforceable Requirements - Clean Air Act (Sections I through VIII)**

**Federally Enforceable Requirements - Title IV Acid Rain (Section IX)**

**Federally Enforceable Requirements – Cross-State Air Pollution Rule (Section X)**

**State Only Enforceable Requirements (Section XI)**

**January 1, 2015**
Effective Date for Title IV (Acid Rain Permit) purposes

**June 15, 2015**
Effective Date for Title V (Federal Opertaing Permit) purposes

**December 31, 2019**
Expiration Date

James B. La Salle

for Thomas A. Faha
Regional Director

JUNE 15, 2015
Signature - Date

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SEPARATE ATTACHMENTS

## I. Facility Information

**Permittee Information**
Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060

**Responsible Official**
Mr. Jeffrey C. Heffelman
Power Generation Station Director

**Acid Rain Designated Representative** and
**CSAPR Authorized Account Representative**
Edward H. Baine
Vice President, Fossil & Hydro System Operations
EPA AIRS ID5115300002

**Facility ID**
Possum Point Power Station
19000 Possum Point Road
Dumfries, Virginia 22026

**Facility Contact person**
Scott Lawton
Director, Electric Environmental Business Support
(804) 273-2600

**EPA AIRS Identification Number:** 51-153-0002

**ORIS Code:** 3804

**Facility Description:** SIC Code 4911 and NAISC ID Code 221112
The facility is an electrical power generation plant that produces power for sale. The significant emissions units of the plant consist of: two natural gas or oil-fired combustion turbine generating units; two natural gas-fired boiler generation units; one oil-fired boiler generation unit; six small, peaking oil-fired combustion turbines; one natural gas-fired auxiliary steam boiler; two natural gas-fired gas pipeline heaters; and four above ground oil storage tanks. There is also a steam turbine generating unit that utilizes steam produced from waste heat exhausted from the two primary combustion turbines and from additional heat supplied as needed by duct burners on the primary combustion turbine exhaust ducts. The duct burners are significant emission units, and for permitting purposes are considered independent of the steam turbine unit, which has no direct emissions.

## II. Emission Units

Equipment to be operated consists of:

| Emission Unit ID | Stack ID | Emission Unit Description | Size/Rated Capacity† | Pollution Control Device Description (PCD) | PCD ID | Pollutant Controlled | Applicable Permit Date |
|---|---|---|---|---|---|---|---|
| **Fuel Burning Equipment / Utility Units** | | | | | | | |
| ES-3 | EP-3 | (Unit 3) Tangentially-fired natural gas boiler - Combustion Engineering – built 1955, converted from coal firing in 2003. | 1,150 million Btu/hr | Low-$NO_X$ burners | N/A | $NO_X$ | Consent Agreement (VOC RACT part, only), 6/12/95; State Operating Permit (NOx RACT), 7/21/00; State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15); Consent Decree, 10/10/03 |
| ES-4 | EP-4 | (Unit 4) Tangentially-fired natural gas boiler - Combustion Engineering – built1962, converted from coal firing in 2003. | 2,350 million Btu/hr | Low-$NO_X$ burners | N/A | $NO_X$ | Consent Agreement (VOC RACT part, only), 6/12/95; State Operating Permit (NOx RACT), 7/21/00; State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15); Consent Decree, 10/10/03 |
| ES-5 | EP-5 | (Unit 5) Tangentially-fired oil boiler - Combustion Engineering – built 1975. Fired w/ No.6 fuel oil during normal operation; No. 2 fuel oil during ignition and flame stabilization. | 8,500 million Btu/hr (860 million Btu/hr during flame stabilization.) | Multicyclone – Universal Oil Product | EC-5 | PM, $PM_{10}$, Pb, As, Co, Mn, Ni, Se | Permit to Construct & Operate, 2/7/73; Consent Agreement (VOC RACT part, only), 6/12/95; State Operating Permit (NOx RACT), 7/21/00; State Operating Permit (Ozone Attainment), 9/26/00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ES-6 | EP-6 | (Unit 6) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968 | 245 million Btu/hr at 80°F inlet | None | - | - | State Operating Permit (Ozone Attainment), 9/26/00 |
| ES-7 | EP-7 | (Unit 7) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968 | 245 million Btu/hr at 80°F inlet | None | - | - | State Operating Permit (Ozone Attainment), 9/26/00 |
| ES-8 | EP-8 | (Unit 8) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968 | 245 million Btu/hr at 80°F inlet | None | - | - | State Operating Permit (Ozone Attainment), 9/26/00 |
| ES-9 | EP-9 | (Unit 9) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968 | 245 million Btu/hr at 80°F inlet | None | - | - | State Operating Permit (Ozone Attainment), 9/26/00 |
| ES-10 | EP-10 | (Unit 10) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968 | 245 million Btu/hr at 80°F inlet | None | - | - | State Operating Permit (Ozone Attainment), 9/26/00 |
| ES-11 | EP-11 | (Unit 11) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968 | 245 million Btu/hr at 80°F inlet | None | - | - | State Operating Permit (Ozone Attainment), 9/26/00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ES-13 | EP-13 | (Unit 6A) Combined Cycle Combustion Turbine – General Electric Model PG7241 (FA) - fired w/natural gas or distillate fuel oil - built 2003 | 2,023 million Btu/hr on gas; 2,092 million Btu/hr on oil | Selective Catalytic Reduction (SCR) | SCR 6A | $NO_X$ | State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15) |
| ES-14 | EP-14 | (Unit 6B) Combined Cycle Combustion Turbine – General Electric Model PG7241 (FA) - fired w/natural gas or distillate fuel oil – built 2003 | 2,023 million Btu/hr on gas; 2,092 million Btu/hr on oil | Selective Catalytic Reduction (SCR) | SCR 6B | $NO_X$ | State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15) |
| ES-15 | EP-13 | Natural gas-fired duct burners installed in Unit 6A heat recovery steam generator downstream of the combustion turbine – built 2003. | 385 million Btu/hr | Selective Catalytic Reduction (SCR) | SCR 6A | $NO_X$ | State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15) |
| ES-16 | EP-14 | Natural gas-fired duct burners installed in Unit 6B heat recovery steam generator downstream of the combustion turbine – built 2003. | 385 million Btu/hr | Selective Catalytic Reduction (SCR) | SCR 6B | $NO_X$ | State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15) |
| ES-17 | EP-17 | Natural gas-fired gas pipeline heater – built 2003 | 11.85 million Btu/hr | None | - | - | Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15) |
| ES-18 | EP-18 | Natural gas-fired gas pipeline heater – built 2003 | 17.37 million Btu/hr | None | - | - | Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15) |
| ES-19 | EP-19 | Horizontally-fired gas auxiliary boiler – built 2003 | 99 million Btu/hr | None | - | - | Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15) |
| ES-20 | EP-20 | Commons Waukusa Emergency Diesel Fire Pump – built 1970's | 735 hp | None | - | - | None |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ES-21 | EP-21 | Onan Emergency Diesel Generator) – built 1979 | (~20 hp | None | - | - | None |
| ES-22 | EP-22 | Cummins Starter Engine - built prior to 2002 | 300 hp | None | - | - | None |
| ES-23 | EP-23 | Cummins Starter Engine - built prior to 2002 | 300 hp | None | - | - | None |
| Process Units | | | | | | | |
| ES-30 | - | Non-halogenated cold solvent degreaser | 225 gallons | None | - | VOC | None |
| ES-31 | - | Non-halogenated cold solvent degreaser | 25 gallons | None | - | VOC | None |
| ES-32 | - | Non-halogenated cold solvent degreaser | 25 gallons | None | - | VOC | None |
| Petroleum Storage Tank†† | | | | | | | |
| ES-26 | - | No. 2 Fuel Oil Storage Tank (constructed for Unit 6A & B combustion turbines) | 2 million gallons | None | - | - | Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (last amended 3/20/15) |

† The Size/Rated Capacity is not by itself an applicable requirement, but may be used to determine applicability of a requirement and may be used in calculations for applicable requirements.

†† There are multiple above ground fuel storage tanks onsite, but only the two-million gallon tank is subject to an applicable requirement.

## III. Fuel Burning Equipment Requirements

### UNITS 3 and 4 (ID#'s ES-3 and ES-4)

### A. Limitations

1. VOC emissions from the Units 3 and 4 boilers shall be controlled by maintaining good combustion practices. Good combustion practices are defined as those combustion practices which are commonly recognized in the utility industry as essential to maintain optimal performance from utility boilers while operating in compliance with all emission limits, and include, but not limited to reasonable vigilance of the operating parameters and reasonable preventive maintenance of the boilers.
(9 VAC 5-80-490 B & C and Section E, Paragraph 5 of the 6/5/95 Consent Agreement)

2. Nitrogen oxides (NOx) emissions from the Units 3 and 4 boilers shall be controlled by use of low NOx burners.
(9 VAC 5-80-490 B & C, Condition 5 of 7/21/00 State Operating Permit, and Condition 5 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

3. The approved fuel for the Units 3 and 4 boilers is natural gas with a maximum sulfur content of 0.3 grains per 100 dry standard cubic feet. A change in the fuel may require a permit to modify and operate and compliance with the requirements of Paragraph 97 of the Consent Decree issued 10/10/03 (attached as Appendix C) .
(9 VAC 5-80-490 B & C, Condition 18 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit, and Paragraphs 96 & 97 of the Consent Decree issued 10/10/03)

4. Emissions from the operation of the Unit 3 boiler shall not exceed the limits specified below, except that the short term limits do not apply for periods of start up, shutdown, or malfunction:

| Pollutant | Short-term Limit | Annual Limit |
|---|---|---|
| Particulate Matter (PM) | 0.10 lbs/million Btu † ††<br>(9 VAC 5-40-900 A.2.c)<br>*and*<br>115 lbs/hr x (actual fuel Btu's input per hour/1150 million Btu/hr), not to exceed 115 lbs/hr<br>(9 VAC 5-40-900 B.1 & B.2, 9 VAC 5-40-920 and 9 VAC 5-40-10 B) | *none* |
| PM-10 | None. | 115 tons/yr for Units 3 & 4 combined * |
| Sulfur Dioxide | *See Condition III.HH.1* | 14 tons/yr for Units 3 & 4 combined |

| | | |
|---|---|---|
| Nitrogen Oxides (as $NO_2$) | 0.20 lbs/million Btu average per calendar day ††† (9 VAC 5-40-310, 9 VAC 5-40-311, and Condition 3 of the State Operating Permit issued 7/21/00 to implement NOx RACT.) | 219 tons/yr (rolled daily) for Units 3 & 4 combined ** *See Section IX. (Title IV Permit Allowances and Requirements).* |
| Carbon Monoxide | 27.3 lbs/hr † * 0.024 lbs/million Btu † * | 363 tons/yr for Units 3 & 4 combined * |
| Volatile Organic Compounds | 0.0054 lbs/million Btu † * | 83 tons/yr for Units 3 & 4 combined * |

† Average for a three-hour sampling period.

†† Technically, the heat input-based emission limit from 9 VAC 5-40-900 A applies to the entire fuel burning equipment installation (all fuel burning equipment units in operation prior to October 5, 1979), but the unit can only be in compliance with the unit-specific hourly emission limit from 9 VAC 5-40-900 B.2 if it also meets the heat input-based emission limit for the installation.

††† The heat input-based $NO_X$ emission rate limit, which applies over the entire year, is less stringent than the limits given in Condition III.HH.3, which apply to the months May through September and to the plant as a whole.

* From Condition 23 of the 10/05/01 PSD/Non-attainment Permit (last amended 3/20/15); complies with 9 VAC 5-50-260.

** From Paragraph 96 of the Consent Decree issued 10/10/03 (attached as Appendix C). Compliance is to be determined by adding the total $NO_X$ emissions from Units 3 and 4 on any given day to the total $NO_X$ emissions from those two units for the preceding 364 consecutive days. Requirements on the permittee if compliance with this limit is not achieved are addressed at Paragraph 96 of the Consent Decree issued 10/10/03.

(9 VAC 5-80-490 B & C)

5. Emissions from the operation of the Unit 4 boiler shall not exceed the limits specified below, except that the short term limits do not apply for periods of start up, shutdown, or malfunction:

| Pollutant | Short-term Limit | Annual Limit |
|---|---|---|
| Particulate Matter (PM) | 0.10 lbs/million Btu † †† (9 VAC 5-40-900 A.2.c) *and* 235 lbs/hr x (actual fuel Btu's input per hour/2350 million Btu/hr), not to exceed 235 lbs/hr (9 VAC 5-40-900 B.1 & B.2, 9 VAC 5-40-920 and 9 VAC 5-40-10 B) | *none* |

| | | |
|---|---|---|
| PM-10 | Same as PM above. | 115 tons/yr for Units 3 & 4 combined * |
| Sulfur Dioxide | *See Condition III.HH.1* | 14 tons/yr for Units 3 & 4 combined * |
| Nitrogen Oxides (as $NO_2$) | 0.20 lbs/million Btu average per calendar day ††† (9 VAC 5-40-310, 9 VAC 5-40-311, and Conditions 5 of the State Operating Permit issued 7/21/00 to implement NOx RACT.) | 219 tons/yr (rolled daily) for Units 3 & 4 combined ** *See Section IX. (Title IV Permit Allowances and Requirements).* |
| Carbon Monoxide | 55.7 lbs/hr †<br>0.024 lbs/million Btu † * | 363 tons/yr for Units 3 & 4 combined * |
| Volatile Organic Compounds | 0.0054 lbs/million Btu † * | 83 tons/yr for Units 3 & 4 combined * |

† Average for a three-hour sampling period.

†† Technically, the heat input-based emission limit from 9 VAC 5-40-900 A applies to the entire fuel burning equipment installation (all fuel burning equipment units in operation prior to October 5, 1979), but the unit can only be in compliance with the unit-specific hourly emission limit from 9 VAC 5-40-900 B.2 it it also meets the heat input-based emission limit for the installation.

††† The heat input-based $NO_X$ emission rate limit, which applies over the entire year, is less stringent than the limits given in Condition III.HH.3, which apply to the months May through September and to the plant as a whole.

* From Condition 23 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit; complies with 9 VAC 5-50-260.

** From Paragraph 96 of the Consent Decree issued 10/10/03 (attached as Appendix C). Compliance is to be determined by adding the total $NO_X$ emissions from Units 3 and 4 on any given day to the total $NO_X$ emissions from those two units for the preceding 364 consecutive days Requirements on the permittee if compliance with this limit is not achieved are addressed at Paragraph 96 of the Consent Decree issued 10/10/03.

(9 VAC 5-80-490 B & C)

6. For the purpose of applying the conditions of this permit, start up and shutdown of the Units 3 and 4 boilers occur only when the Units 3 and 4 generators are not supplying electrical power to the utility grid at a stable minimum load, determined during the 2003 break-in period to be 40 MW for Unit 3 and 80 MW for Unit 4. Periods when the boilers are being fired in a stand-by mode shall not be considered as periods of start up or shutdown.

(9 VAC 5-80-490 B & C and Condition 9 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

7. Visible emissions from each of the Units 3 and 4 boiler stacks shall not exceed 10 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity. This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-490 B & C, and Condition 28 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

*Note: Additional limitations that apply to all of the significant fuel burning equipment units are found at Section III. HH.*

## B. Monitoring

1. The permittee shall measure and record sulfur dioxide ($SO_2$) emissions from the Units 3 and 4 boilers by a method provided at 40 CFR 75.11(d), which includes the options of using a continuous emission monitoring system (CEMS) or methods described at 40 CFR 75 Appendix D for gas-fired units.
(9 VAC 5-80-490 E; 9 VAC 5-80-420 B; 9 VAC 5-50-40; 9 VAC 5-40-1000; 40 CFR 72.9; 40 CFR 75.10; 40 CFR 75.19; and monitoring requirements at 40 CFR Part 75 for units subject to Acid Rain Program )

2. Continuous emission monitoring systems (CEMS) shall be installed to measure and record nitrogen oxides ($NO_X$, measured as $NO_2$) emissions from the Units 3 and 4 boilers as lbs/MMBtu. The $NO_X$ and diluent CEMS shall be installed, calibrated, maintained, audited and operated in accordance with the requirements listed in 40 CFR 75.
(9 VAC 5-80-490 E; 9 VAC 5-80-420 B; 9 VAC 5-50-40; 9 VAC 5-40-1000; 40 CFR 72.9; 40 CFR 75.10; Condition 10 of 7/21/00 State Operating Permit; Condition 3, of 9/26/00 State Operating Permit; Condition 37 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit; and monitoring requirements at 40 CFR Part 75 for units subject to Acid Rain Program )

3. Continuous emission monitoring systems (CEMS) shall be installed to measure and record carbon monoxide (CO) emissions from the Units 3 and 4 boilers as lbs/MMBtu. The monitors shall be installed, calibrated, maintained, audited and operated in accordance with the requirements of 40 CFR 60 except as noted in condition III.B.5. For the purposes of this permit, data shall be reduced to 3-hour rolling averages. The CEMS data for CO emissions may be grounds for DEQ to request that a stack test be performed to prove compliance, especially, but not limited to a case in which the permittee has not taken corrective action when the data indicate that a non-compliance condition may exist. This condition does not exempt the permittee from other applicable state and federal monitoring requirements.
(9 VAC 5-80-490 E and Condition 37 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

4. The permittee shall determine carbon dioxide ($CO_2$) emissions from the Units 3 and 4 boilers in accordance with a method provided in 40 CFR 75.
(9 VAC 5-80-420 B, 40 CFR 72.9 and 40 CFR 75.10)

5. For the $NO_X$ and diluent CEMS the quality control requirements of 40 CFR Part 75 shall be met. The Quality Assurance Accuracy Specifications for CO CEMS shall be 40 CFR 60 Appendix F, Procedure 1. A linearity test for NOx and diluent, and a calibration gas audit (CGA) for CO, shall be performed once per Quality Assurance (QA) operating quarter (≥ 168 hours operation) not to exceed four calendar quarters. A relative accuracy test audit (RATA) test shall be conducted once every four QA operating quarters (≥ 168 hours operation each), not to exceed eight calendar quarters. The provisions for a grace period to complete testing shall apply (40 CFR 75, Appendix B 2.2.4 & 2.3.3). Data validation shall be as defined in 40 CFR Part 75, Appendix B, 2.3.2 with the exception that missing data for CO, resulting from continuous monitor system breakdown, repair, calibration checks, and zero and span adjustments, shall be reported as monitor downtime and not substituted. No bias factor shall be applied to the CO monitored value as per 40 CFR Part 60.
(9 VAC 5-80-490 E and Condition 39 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

6. Visible Emissions Evaluation – At least once per day, the permittee shall have someone visually observe the stacks of the Units 3 and 4 boilers for visible emissions when operating. If the observer sees an abnormally opaque flue gas plume, the permittee shall have a certified smoke reader conduct within 4 hours, or as soon thereafter as weather and lighting conditions permit, a 40 CFR Part 60, Method 9 visible emissions evaluation of the plume for a minimum of 12 minutes. An abnormally opaque flue gas plume is one that is obviously more opaque than the plume was at the time the plume was initially determined to be in compliance with the applicable visible emissions limit of the PSD/Non-attainment permit issued 10/05/01(last amended 3/20/15). In lieu of someone visually observing a particular stack for visible emissions, the permittee may install and operate a continuous opacity monitor that meets the design specifications of 40 CFR Part 60, Appendix B and is calibrated, maintained, and operated in accordance with the requirements of 40 CFR 60.13 and Appendix B or DEQ approved procedures that are equivalent to the requirements of 40 CFR 60.13 and Appendix B. If continuous opacity monitor(s) are installed and operated, they shall be used only to indicate the need for a Method 9 visible emissions evaluation.
(9 VAC 5-80-490 E, 9 VAC 5-50-80, 9 VAC 5-50-260, and Condition 48 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

## C. Recordkeeping

1. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be agreed upon with the DEQ Northern Regional Office (NRO) Air Compliance Manager. These records shall include, but are not limited to:

   a. Annual throughput of natural gas to the Units 3 and 4 boilers, calculated monthly as the total for the most recent twelve complete calendar months.

b. Monthly emissions calculations for PM, PM-10, sulfur dioxide, nitrogen oxides, carbon monoxide, and VOC from the Units 3 and 4 stacks using calculation methods approved by the NRO Air Compliance Manager to verify compliance with the lb/hr, ton/yr, and lbs/MMBtu emissions limitations in Conditions III. A. 4 and 5.

c. Continuous monitoring system calibrations and calibration checks, percent operating time, and excess emissions.

d. Results of the flue gas plume observations required each shift and the time and lighting conditions when the observations were conducted.

e. Results of all stack tests, visible emission evaluations and CEMS performance evaluations.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-490 F and Condition 35 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. Unless otherwise specified in individual conditions, all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all electronically recorded raw data for continuous monitoring instrumentation, and copies of all reports required by this permit.
(9 VAC 5-80-490 F.)

3. The permittee shall maintain records of the occurrence and duration of any startup, shutdown or malfunction in the operation of these units, any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
(9 VAC 5-80-490 F and 9 VAC 5-40-50 B)

## D. Testing

1. The stacks from the Units 3 and 4 boilers shall be maintained so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods.
(9 VAC 5-50-30 F, 9 VAC 5-80-490 E & F, and Condition 49 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. No less than once per every five calendar years, performance testing shall be conducted for total volatile organic compounds (VOC) emissions from the Units 3 and 4 boilers, using EPA Method 25 or equivalent methods approved by the NRO Air Compliance Manager. The performance test shall be used to determine compliance with the emission limits contained in Conditions III.A.4 and 5 above. Should an application shield be in place and the renewed permit has not been issued, the requirement for testing on each boiler at a frequency of no less than every five calendar years continues in effect as if the permit had been renewed. Testing for one boiler does not need to be during the same year or at the same time of year as for

the other boiler, but it may be. Testing shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the NRO Air Compliance Manager. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results (one hard and one electronic) shall be submitted to the Air Compliance Manager within 60 days after each test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 and 9 VAC 490 E)

3. If testing is conducted in addition to the testing and monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ. Those procedures include submitting a test protocol to the NRO Air Compliance Manager at least 30 days prior to testing unless, due to mitigating circumstances and upon request, less than 30 days lead time is approved by the NRO Air Compliance Manager.
(9 VAC 5-80-490 E)

## E. Reporting

1. The permittee shall submit written reports to the NRO Air Compliance Manager of excess emissions from any process monitored by a continuous monitoring system (CMS) on a quarterly basis, postmarked no later than the 30th day following the end of each calendar quarter. These reports shall include, but are not limited to the following information:

   a. The magnitude of excess emissions, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

   b. Specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the source; the nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

   c. The date and time identifying each period during which the continuous monitoring system was inoperative, except for the zero and span checks and the nature of the system repairs or adjustments; and,

   d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

   (9 VAC 5-80-490 E, 9 VAC 5-50-50 and Condition 40 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit))

2. Data collected from the NOx CEMS for determining compliance with the RACT limit of 0.20 lb/MMBtu in Conditions III.A. 4 and 5 shall be processed in accordance with the requirements of 40 CFR Part 60. A report presenting the results of the monitoring shall be periodically submitted to the NRO Air Compliance Manager. The details of the monitoring, recordkeeping and reporting shall be as proposed in the

letter dated September 29, 2000, from Martin L. Bowling, Jr. of Dominion to Alice G. Nelson of DEQ. A copy of that letter is attached as Appendix B. This condition does not preclude other applicable reporting requirements.
(9 VAC 5-80-490 and Condition 10 of 7/21/00 State Operating Permit)

*Note: Additional reporting requirements for these units are included in Section IX. (Title IV Permit Allowances and Requirements.)*

## UNIT 5 (ID# ES-5)

## F. Limitations

1. Particulate emissions from the Unit 5 boiler shall continue to be controlled by the use of a multicyclone or control device of at least equivalent efficiency.
(9 VAC 5-80-490 B & C, 9 VAC 5-40-900, and 9 VAC 5-80-1110 C.)

2. VOC emissions from the Unit 5 boiler shall be controlled by maintaining good combustion practices. Good combustion practices are defined as those combustion practices which are commonly recognized in the utility industry as essential to maintain optimal performance from utility boilers while operating in compliance with all emission limits, and include, but not limited to reasonable vigilance of the operating parameters and reasonable preventive maintenance of the boilers.
(9 VAC 5-80-490 B & C and Section E, Paragraph 5, of the 6/12/95 Consent Agreement)

3. Nitrogen oxides (NOx) emissions from the Unit 5 boiler shall be controlled by use of tangential firing, separate overfire air, and flue gas recirculation.
(9 VAC 5-80-490 B & C, 9 VAC 5-40-310 and Condition 7 of the 7/21/00 State Operating Permit)

4. The approved fuel for the Unit 5 boiler is fuel oil. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-490 B & C, and the opening paragraph of the 2/7/73 Permit to Construct & Operate)

5. Emissions from the operation of the Unit 5 boiler shall not exceed the limits specified below:

| Pollutant | Short-term Limit | Annual Limit |
|---|---|---|
| Particulate Matter (PM) | 0.10 lbs/million Btu † (9 VAC 5-50-410 Subpart D and 40 CFR 60.42(a)(1)) *and* 850 lbs/hr x (actual fuel Btu's input per hour/8500 x $10^6$ Btu/hr), not to exceed 850 lbs/hr (9 VAC 5-40-900 B.1 & B.2, 9 VAC 5-40-920 and 9 VAC 5-40-10 B) | *none* |

| | | |
|---|---|---|
| PM-10 | *none* | *none* |
| Sulfur Dioxide | 0.80 lbs/million Btu † (9 VAC 5-50-410 Subpart D and 40 CFR 60.43(a)(1)) | *See Section IX. (Title IV Permit Allowances and Requirements.).* |
| Nitrogen Oxides (as $NO_2$) | 0.30 lbs/million Btu † (9 VAC 5-50-410 Subpart D and 40 CFR 60.44(a)(2)) and 0.25 lbs/million Btu 30-day rolling average calculated daily †† (9 VAC 5-40-310, 9 VAC 5-40-311, and Condition 7 of the 7/21/00 State Operating Permit to implement NOx RACT.) | *See Section IX. (Title IV Permit Allowances and Requirements).* |

† Average for a three-hour sampling period.
†† The heat input-based NOx emission rate limit above, which applies over the entire year, is less stringent than the limits given in Condition III.HH.3, which apply to the months May through September and to the plant as a whole.
(9 VAC 5-80-490 B & C)

6. Visible emissions from the Unit 5 boiler stack shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 27 percent opacity. This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-410 and 9 VAC 5-80-490 B & C)

*Note: Additional limitations that apply to all of the significant fuel burning equipment units are found at Section III. HH.*

## G. Monitoring/Compliance Assurance Monitoring

1. The permittee shall measure and record sulfur dioxide ($SO_2$) emissions from the unit 5 boiler by a method provided at 40 CFR 75.11(d), which includes the options of using a continuous emission monitoring system (CEMS) or methods described at 40 CFR 75 Appendix D for oil-fired units.
(9 VAC 5-80-490 E; 9 VAC 5-80-420 B; 9 VAC 5-50-40; 9 VAC 5-40-1000; 40 CFR 72.9; 40 CFR 75.10; 40 CFR 75.19; and monitoring requirements at 40 CFR Part 75 for units subject to Acid Rain Program )

2. A CEMS shall be installed to measure and record nitrogen oxides emissions. The monitor shall be installed, calibrated, maintained, audited and operated in accordance with the requirements listed in 40 CFR 75.
(9 VAC 5-40-40; 9 VAC 5-40-1000; 40 CFR 72.9; 40 CFR 75.10; Condition 10 of 7/21/00 State Operating Permit; Condition 3, of 9/26/00 State Operating Permit; and monitoring requirements at 40 CFR Part 75 for units subject to Acid Rain Program )

3. The permittee shall determine carbon dioxide ($CO_2$) emissions from the Unit 5 boiler in accordance with a method provided in 40 CFR 75.
(9 VAC 5-80-420 B, 40 CFR 72.9 and 40 CFR 75.10)

4. A continuous opacity monitoring system (COMS) shall be installed to measure and record opacity. The monitor shall be installed, calibrated, maintained, audited and operated in accordance with the requirements listed in 40 CFR 60 and 40 CFR 75.10 (d).
(9 VAC 5-80-490 E, 9 VAC 5-80-420 B, 9 VAC 5-40-40, 9 VAC 5-40-1000, 40 CFR 72.9, and 40 CFR 75.10)

*The following monitoring conditions (Nos. 5 through 12) are compliance assurance monitoring conditions pursuant to 40 CFR Part 64.*

5. The permittee shall monitor, operate, calibrate and maintain the multiclone controlling the Unit 5 boiler (ID# ES-5) particulate emissions according to the following:

| Indicator | Indicator 1<br>Inspection of the Mechanical Dust Collector | Indicator 2<br>Opacity |
|---|---|---|
| **Measurement approach** | Inspection of the Mechanical Dust collector by trained station personnel. | Opacity is continuously monitored by a Continuous Opacity Monitoring System (COMS). Continuous values are reduced to six-minute block averages. |
| **Indicator range** | An excursion is defined failure to conduct the inspection. | An excursion of opacity is defined as any six-minute period during any one-hour period that exceeds 20% opacity, or if there is more than one six-minute period per hour of greater than 27% opacity. This excludes periods of startup, shutdown and malfunction. |
| **Performance criteria:**<br><br>**Verification of operational status** | Inspections of the dust collector are part of the preventive maintenance as needed to ensure efficient control equipment performance. | COMS were installed in accordance with 40 CFR 60, Appendix B, Performance Specification 1 (PS-1). |
| **QA/QC practices and criteria** | The dust collector is maintained consistent with operational design of the equipment and good engineering practices. | Zero and span drift are checked daily and filter audits are performed in accordance with PS-1. Filter audits are performed semiannually. |
| **Monitoring frequency and data collection procedure** | Inspections are performed as needed, but occur no less than bi-annually and no more than 8 months apart. All inspections are recorded in a computerized maintenance system. | Continuous for COMS. The opacity data are collected and retained by a computerized Data Acquisition And Handling System (DAHS). |

(9 VAC 5-80-490 E and 40 CFR 64.6 (c))

6. The permittee shall conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.
(9 VAC 5-80-490 E and 40 CFR 64.6 (c))

7. At all times, the permittee shall maintain the monitoring equipment, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.( 9 VAC 5-80-490 E and 40 CFR 64.7 (b))

8. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the Unit 5 boiler is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of compliance assurance monitoring, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by inadequate maintenance or improper operation are not malfunctions.
(9 VAC 5-80-490 E and 40 CFR 64.7 (c))

9. Upon detecting an excursion or exceedance, the permittee shall restore operation of the Unit 5 boiler, including the control device and associated capture system, to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup and shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator, designated condition, or below the applicable emission limitation or standard, as applicable.
(9 VAC 5-80-490 E and 40 CFR 64.7 (d)(1))

10. Determination that acceptable procedures were used in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
(9 VAC 5-80-490 E and 40 CFR 64.7(d)(2))

11. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Regional Air Compliance Manager and, if necessary, submit a proposed modification to this

permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
(9 VAC 5-80-490 E and 40 CFR 64.7(e))

12. If the number of exceedances or excursions exceeds 5 percent duration of the operating time for the Unit 5 boiler for a semiannual reporting period, the permittee shall develop, implement and maintain a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. If a QIP is required, the permittee shall have it available for inspection. The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following, as appropriate:

    Improved preventative maintenance practices;

    Process operation changes;

    Appropriate improvements to control methods;

    Other steps appropriate to correct control performance; and

    More frequent or improved monitoring.

    (9 VAC 5-80-490 E and 40 CFR 64.8(a) and (b))

## H. Recordkeeping

1. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be agreed upon with the NRO Air Compliance Manager. These records shall include, but are not limited to:

    a. Monthly and annual (most recent twelve months) throughput of residual and distillate oil to the Unit 5 boiler, determined monthly from electronically measured changes in the level of the fuel in the fuel storage tanks, measured with a precision of at least to the nearest millimeter, and taking into account known additions and other factors such as temperature that may affect the level.

    b. All fuels supplier certifications

    c. Monthly emissions calculations for PM, sulfur dioxide, and nitrogen oxides from the Unit 5 stack using calculation methods approved by the NRO Air Compliance Manager to verify compliance with the lb/hr, ton/yr, and lbs/MMBtu emissions limitations in Condition III. F.5.

    d. Continuous monitoring system calibrations and calibration checks, percent operating time, and excess emissions.

e. Results of all stack tests, visible emission evaluations and CEMS performance evaluations.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-490 F and 9 VAC 5-50-50)

2. The permittee shall maintain records of the occurrence and duration of any startup, shutdown or malfunction in the operation of this unit, any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
(9 VAC 5-50-50 B and 9 VAC 5-80-490 F)

3. The permittee shall obtain a certification from the fuel supplier with each shipment of residual fuel oil. Each fuel supplier certification shall include the following:

   a. The name of the fuel supplier;
   b. The date on which the residual fuel oil was received;
   c. The volume of residual fuel oil delivered in the shipment;
   d. The sulfur content of the oil.

   (9 VAC 5-80-490 F)

4. The permittee shall obtain a certification from the fuel supplier with each shipment of distillate fuel oil. Each fuel supplier certification shall include the following:

   a. The name of the fuel supplier;
   b. The date on which the distillate fuel oil was received;
   c. The volume of distillate fuel oil delivered in the shipment;
   d. The sulfur content of the oil.

   (9 VAC 5-80-490 F)

## I. Testing

1. No less than once per every five calendar years, performance testing shall be conducted for particulate emissions from Unit #5, using EPA Method 5 or equivalent methods approved by the NRO Air Compliance Manager. The performance test shall be used to determine compliance with the emission limits contained in Condition III.F.5 above. Should an application shield be in place and the renewed permit has not been issued, the requirement for testing on each boiler at a frequency of no less than every five calendar years continues in effect as if the permit had been renewed. Testing shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the NRO Air Compliance Manager. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results (one hard and one electronic) shall be submitted to the NRO Air Compliance Manager within 60 days after each test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-490 E and 9 VAC 5-50-30)

2. If testing is conducted in addition to the testing and monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ. Those procedures include submitting a test protocol to the NRO Air Compliance Manager at least 30 days prior to testing unless, due to mitigating circumstances and upon request, less than 30 days lead time is approved by the NRO Air Compliance Manager.
(9 VAC 5-80-490 E)

## J. Reporting

1. The permittee shall submit written reports to the NRO Air Compliance Manager of excess emissions from any process monitored by a continuous monitoring system (CMS) on a quarterly basis, postmarked no later than the 30th day following the end of each calendar quarter. These reports shall include, but are not limited to the following information:

   a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

   b. Specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

   c. The date and time identifying each period during which the continuous monitoring system was inoperative, except for the zero and span checks and the nature of the system repairs or adjustments; and,

   d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

   This condition does not apply to the continuous emissions monitoring system for sulfur dioxide on Unit 5 if the permittee is utilizing another method to demonstrate compliance with the sulfur dioxide limit in Condition III.F.5. in accordance with this permit.

   (9 VAC 5-80-490 F and 9 VAC 5-50-50)

2. Data collected from the NOx CEMS for determining compliance with the RACT limit of 0.25 lb/MMBtu in Condition III.F.5 shall be processed in accordance with the requirements of 40 CFR Part 60. A report presenting the results of the monitoring shall be periodically submitted to the NRO Air Compliance Manager. The details of the monitoring, recordkeeping and reporting shall be as proposed in the letter dated September 29, 2000, from Martin L. Bowling, Jr. of Dominion to Alice G. Nelson of DEQ. A copy of that letter is attached as Appendix B. This condition does not preclude other applicable reporting requirements.
(9 VAC 5-80-490 and Condition 10 of 7/21/00 State Operating Permit)

*Note: Additional reporting requirements for this unit are included in Section IX (Title IV Permit Allowances and Requirements).*

## K. Applicable Requirements from 40 CFR 63, Subpart UUUUU

The existing, tangentially, oil-fired electric utility steam generating unit > 25MW (Unit 5) shall comply with the applicable requirements of National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units, 40 CFR 63, Subpart UUUUU as follows:

1. Compliance with the applicable requirements of 40 CFR 63, Subpart UUUUU shall be achieved by the date specified in 40 CFR 63.9984;
2. Submit applicable notifications specified in §63.10030 and in Subpart A of 40 CFR Part 63;
3. Operate and maintain the affected unit, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions as specified in 40 CFR 63.10000(b);
4. Conduct an initial performance tune-up of the EGU according to 63.10021(e) and/or 63.10005(f);
5. If the unit is operated such that it qualifies as a limited-use liquid oil-fired unit as defined in 40 CFR 63.10042, the emission limits (Table 2), associated emission performance testing requirements and the operating limits (Table 4) of this subpart will not apply to the unit, but the permittee shall comply with the applicable work practice standard requirements (Table 3, item 1) of this subpart;
6. If the unit is operated such that it ceases to qualify as a limited-use liquid oil-fired unit as defined in 40 CFR 63.10042, conduct initial performance testing for all pollutants to demonstrate compliance with applicable emission limits in accordance with 40 CFR 63.10000(c)(2), 63.10000(d), 63.10005(a), 63.10005(b), 63.10005(c), 63.10005(d). Submit a Notification of Compliance Status summarizing the results of the initial compliance demonstration as provided in 63.10030.
7. If the unit is operated such that is ceases to qualify as a limited-use liquid oil-fired unit as defined in 40 CFR 63.10042, conduct subsequent performance tests and subsequent tune-ups according to 63.10006;
8. Conduct all required performance tests according to 63.7(d), (e), (f) and (h), except as otherwise provided in 63.10007 and develop a site-specific test plan according to the requirements in 63.7(c);
9. Monitor and collect data according to 63.10020 and, if applicable, the site-specific monitoring plan required by 63.10000(d);
10. Demonstrate continuous compliance with applicable emission limits, operating limits and work practice standards as specified in 63.10021;
11. Submit applicable reports according to 63.10031;
12. Maintain all applicable records as required by 63.10032;

(9 VAC 5-80-490 and 40 CFR 63 Subpart UUUUU)

## UNITS 6, 7, 8, 9, 10 & 11 (ID#'s ES-6, ES-7, ES-8, ES-9, ES-10 and ES-11)

*Note: This section does not apply to Units 6A and 6B, which are different than the Unit#6 that is one of the six small peaking units covered in this section.*

### L. Limitations

1. Emissions from the operation of the Units #6, 7, 8, 9, 10, and 11 combustion turbines shall not exceed the limits specified below for each unit:

| Pollutant | Short-term Limit | Annual Limit |
|---|---|---|
| Particulate Matter (PM) | 0.10 lbs/million Btu† (9 VAC 5-40-900 A.2.c) and 24.5 lbs/hr x (actual fuel Btu's input per hour/245 million Btu/hr) † (9 VAC 5-40-900 B.1 & B.2 and 9 VAC 5-40-920) | none |
| Sulfur Dioxide | *See Condition III.HH.1* | none |
| Nitrogen Oxides (as $NO_2$) | *See Condition III.HH.3* | none |

† Average for a three-hour sampling period.

(9 VAC 5-80-490 B & C)

2. Visible emissions from each of the six turbine stack(s) shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity.
(9 VAC 5-40-940, 9 VAC 5-40-20 A.4, and 9 VAC 5-80-490 B & C)

*Note: Additional limitations that apply to all of the significant fuel burning equipment units are found at Section III. HH.*

### M. Monitoring

1. The permittee shall perform visible emissions observations (VEO's) on the exhaust stack of each combustion turbine (Units #6, 7, 8, 9, 10, and 11) according to the following operating time-dependent schedule:

| | Operating Time | Observation Frequency |
|---|---|---|
| a. | hours operated < 20 hrs/yr | no observation required |
| b. | 20 hrs/yr < hours operated < 200hrs/yr | once per year |
| c. | hours operated > 200 hrs/yr | once every 200 hours |

The VEO's shall be conducted using 40 CFR 60 Appendix A Method 22 techniques (condensed water vapor/steam is not a visible emission) for at least two minutes to determine if there are any visible emissions, unless the unit is monitored by a 40 CFR 60 Appendix A continuous opacity monitor. Each emissions unit in the Method 22 technique observation having visible emissions shall be evaluated by conducting a 40 CFR 60 Appendix A Method 9 visible emissions evaluation (VEE) for at least six (6) minutes, unless corrective action is taken that achieves no visible emissions. 40 CFR 60 Appendix A Method 9 requires the observer to have a Method 9 certification that is current at the time of the VEE. If any of these six (6) minute VEE averages exceed 20 percent opacity, a VEE shall be conducted on the emissions from the unit(s) with the excess for at least three more six minute periods (at least 18 minutes). All visible emission observations, VEE results, and corrective actions taken shall be recorded.
(9 VAC 5-80-490 E and 9 VAC 5-40-20)

2. The permittee shall sample and test the distillate oil in the distillate oil storage tank for sulfur content after each shipment of distillate oil. Dominion defines a shipment as a series of truck transport loads or barge transfer from any source or other vendor. Distillate oil sulfur content shall be determined using ASTM D2880 or another approved ASTM method incorporated in 40 CFR 60 by reference.
(9 VAC 5-40-50 and 9 VAC 5-80-110)

## N. Recordkeeping

1. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with NRO Air Compliance Manager. These records shall include, but are not limited to:

    a. All distillate fuel analyses

    b. Results of all stack tests and visible emissions evaluations and visible emissions observations.

    These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years
    (9 VAC 5-80-490 F)

2. The permittee shall maintain records of the occurrence and duration of any startup, shutdown or malfunction in the operation of these units, any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring

system or monitoring device is inoperative.
(9 VAC 5-40-50 B and 9 VAC 5-80-490 F)

## O. Testing

1. No less than once per every five calendar years, performance testing shall be conducted for particulate matter (PM) emissions from Units 6, 7, 8, 9, 10 and 11, as prescribed by this condition, using EPA Method 5 or equivalent methods approved by the NRO Air Compliance Manager. Testing shall be conducted and reported and data reduced as set forth in 9 VAC 5-40-30. The details of the tests are to be arranged with the Air Compliance Manager. The permittee shall submit a test protocol at least 30 days prior to testing. The term operation in the following exceptions and qualifications means when fuel is combusted in the unit, which includes periods of start up and shutdown. For the purpose of complying with this condition only, the following exceptions and qualifications shall apply.

   a. If during each calendar year of the permit term no individual unit exceeds 87 total hours of operation (including start up and shut down), no performance testing shall be required;

   b. If within a calendar year any one unit exceeds 87 total hours of operation, that same unit shall be tested within 12 months of surpassing 87 hours of operation that year, but shall not be required to be tested again during the term of the permit, except to demonstrate compliance following corrective action taken as a consequence of the first test failing to demonstrate compliance;

   c. If during the permit term a second unit exceeds 87 total hours of operation in any calendar year, but not necessarily the same calendar year as the first unit, the second unit to operate 87 hours in a calendar year shall be tested as outlined in the introduction to this condition within 12 months of surpassing 87 hours of operation that year;

   d. If during any calendar year of the permit term the sum of the hours of operation of each of Units 6, 7, 8, 9, 10 and 11 combined exceeds 522 and fewer than two of the units have already been tested during the permit term, the two units most frequently operated that year shall be tested within 12 months of the combined hours of operation surpassing 522, except that the results of a unit that has already been tested during the permit term may be substituted for the testing of one of the two that would otherwise be tested;

   e. If either the first or second unit performance tested for PM emissions during the permit term (before corrective action) had test results averaging greater than 85 percent of any PM limit in Condition III.L.1, all of the untested units shall also undergo performance testing for PM during the term of the permit, regardless of their hours of operation, except for any unit that the permittee agrees to permanently shut down. For the purpose of demonstrating compliance with the PM Limits in Condition III.L.1 the performance tests would be compared to 100 % of the PM limit;

f. If untested units must be tested during the remaining permit term, because a tested unit had test results averaging greater than 85 percent of any PM limit in Condition III.L.1., at least one of the untested units shall be tested within 12 months of completion of the testing that showed emissions greater than 85 percent of a PM limit, and the remaining untested units may be tested any time before the end of the permit term;

g. The permittee shall conduct a Method 9 visual emission evaluation (VEE) concurrent with the performance testing for PM emissions on units being tested for the purpose of satisfying requirements of this permit condition;

h. For the purpose of complying with this condition, the term of the permit is presumed to be five years and if for some reason the permit term is extended due to failure of the renewal to be timely or for other reasons, the requirements of this condition still must be fulfilled as if the permit were to expire after a term of five years, except that any requirement that must be fulfilled within a 12- month period that would not end prior to the end of the five-year permit term, may be completed after the five-year permit term has ended, so long as it is done within the 12-month period required;

i. To the extent that this condition allows for requirements to be completed after the end of the term of the permit, those requirements shall still be considered to be enforceable, even if a new or renewed permit does not require them, unless the new or renewed permit explicitly dismisses compliance with the prior requirements;

j. No part of this condition is presumed to apply to other conditions that may be established for specific size particulate matter other than as defined by 9 VAC 5-10-20 as "particulate matter."

k. If during the term of this permit the restoration of the electric grid becomes necessary, Units 6, 7, 8, 9, 10 and 11 (or a combination of any or all of these units) shall be allowed to temporarily operate in a black-start mode of operation. Hours of operation during a black-start event may be exempted, as specified in Condition VIII.CC of this permit, and may not count against the 87 hours of operation in Condition III.O.1.a. A black start event is considered to end once the permittee receives notification from the system operator that the power grid has been restored. During black-start operation of Units 6, 7, 8, 9, 10 and 11 (or any combination thereof) the permittee shall to the maximum extent practicable minimize operation of these units.

(9 VAC 5-40-30 and 9 VAC 5-80-490 E & F)

2. If testing is conducted in addition to the testing and monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ. Those procedures include submitting a test protocol to the NRO Air Compliance Manager at least 30 days prior to testing unless, due to mitigating circumstances and upon request, less than 30 days lead time is approved by the NRO Air Compliance Manager.
(9 VAC 5-80-490 E)

## P. Reporting

1. Within 60 days following each calendar year, the permittee shall submit to the NRO Air Compliance Manager a written report of the number of hours and at what capacity factor that Units 6, 7, 8, 9, 10 and 11 each operated during the calendar year.
(9 VAC 5-80-490 F and 9 VAC 5-40-7430 B.3.a)

2. If performance testing is conducted to determine compliance with emissions limits of this permit, two copies of the test results shall be submitted to the NRO Air Compliance Manager within 60 days after each test completion and shall conform to the test report format enclosed with this permit. If the testing is conducted to comply with requirements of Condition III.O.1, copies of any previous test results conducted to comply with requirements of Condition III.O.1 shall be attached to the copies of the new test results.
(9 VAC 5-80-490 E)

3. No later than 30 days following the end of a black start outlined by Condition III.O.1, the permittee shall submit to the NRO Air Compliance Manager a written report that contains the following information:

   a. The date and time of the start and end of the black start operation.

   b. A brief description, including documentation from the system operator, of the suspected cause of the system outage that necessitated the black start operation of these units.

   (9 VAC 5-80-490 E)

**UNITS 6A & 6B (ID#'s ES-13 & ES-14)/ASSOCIATED DUCT BURNERS (ID#'s ES-15 & ES-16)**

## Q. Limitations

1. Nitrogen oxides (NOx) emissions from the Units 6A and 6B combustion turbines shall be controlled by "dry/low-NOx" combustion when firing natural gas and by water injection when firing distillate fuel oil. The nitrogen oxides in the exhaust of the combustion turbines, downstream of the duct burners, shall be controlled by selective catalytic reduction (SCR) with ammonia injection. The SCR equipment shall be provided with adequate access for inspection. The SCR shall be in operation when the turbines are operating, except when operation of the SCR would occur under conditions outside of those recommended by the SCR system vendor, including, but not limited to, when emissions of ammonia would be excessive. (9 VAC 5-80-490 B & C, 9 VAC 5-50-260 and Condition 3 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. The approved fuels for Units 6A and 6B combustion turbines are natural gas (includes liquefied natural gas) with a maximum sulfur content of 0.3 grains per 100 dry standard cubic feet and distillate fuel oil with a maximum sulfur content of 0.05 percent by weight. A change in the fuel may require a permit to modify and operate. (9 VAC 5-80-490 B & C, Condition 14 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit and 40 CFR 60.333)

3. The approved fuels for Units 6A and 6B duct burners are natural gas (includes liquefied natural gas) with a maximum sulfur content of 0.3 grains per 100 dry standard cubic feet. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-490 B & C and Condition 15 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

4. The Units 6A and 6B combustion turbines in combination shall consume no more than 14.1 million gallons of distillate fuel oil per year and no more than 30,838 million cubic feet of natural gas per year. Compliance with these limits shall be determined monthly as the total for the most recent twelve complete calendar months.
(9 VAC 5-80-490 B & C and Condition 10 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

5. The two duct burners in combination shall not consume more than 1,520 million cubic feet of natural gas per year and shall operate only when the Units 6A and 6B turbines are firing natural gas. Compliance with these limitations shall be determined monthly as the total for the most recent twelve complete calendar months.
(9 VAC 5-80-490 B & C and Condition 11 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

6. Stack emissions from the operation of the Units 6A and 6B combustion turbines and associated duct burners (DB's) shall not exceed the limits specified below, except that the short term limits do not apply for periods of start up, shutdown, or malfunction:

| Pollutant | Short-term Limit (each unit) | | | Annual Limit (units combined) |
|---|---|---|---|---|
| | | Natural Gas | Fuel Oil | |
| PM-10 | DB's Off | 18.3 lbs/hr † | 53.1 lbs/hr † | 185 tons/yr † |
| | DB's On | 22.2 lbs/hr † | NA | |
| PM-2.5 (particulate matter < 2.5 microns in diameter) | DB's off | 18.3 lbs/hr † | 53.1 lbs/hr † | 185 tons/yr † |
| | DB's on | 22.2 lbs/hr † | | |
| Sulfur Dioxide | DB's Off | 1.74 lbs/hr †† | 98.9 lbs/hr †† | 59.7 tons/yr †† |
| | DB's On | 2.08 lbs/hr †† | NA | |
| Nitrogen Oxides (as $NO_2$) | DB's Off | 3.5 ppmvd † 32.5 lbs/hr † | 22 ppmvd † 180 lbs/hr † | 285 tons/yr †† |
| | DB's On | 3.5 ppmvd † 32.5 lbs/hr † | NA | |
| | During start up, shutdown, and malfunction the limit defaults to 40 CFR 60.4320 of 40 CFR Part 60, Subpart KKKK. | | | |
| Carbon Monoxide | DB's Off | 32 lbs/hr † 9 ppmvd † | 79 lbs/hr † 38 ppmvd † | 336 tons/yr † |
| | DB's On | 63 lbs/hr † 19.3 ppmvd † | NA | |
| Volatile Organic Compounds | DB's Off | 1.2 ppmvd ††† | 2.6 ppmvd ††† | 34.6 tons/yr †† |
| | DB's On | 2.3 ppmvd ††† | NA | |
| Formal-dehyde | DB's Off - | $6.2 \times 10^{-4}$ lbs/MMBtu†††† | $2.8 \times 10^{-4}$ lbs/MMBtu†††† | 9.8 tons/yr †† |
| | DB's On | $6.2 \times 10^{-4}$ lbs/MMBtu†††† | NA | |

NA = Not Applicable (The duct burners don't operate when combustion turbines fire fuel oil.)

ppmvd = parts per million by volume on a dry gas basis

All concentration limits are at 15 percent $O_2$.

All concentration and hourly emission limits represent averages for a three-hour sampling period, except for the $NO_X$ limits when compliance is determined by continuous emissions monitors, in which case rolling averages are calculated hourly for the most recent eight hours of operation. Compliance with the 40 CFR Part 60, Subpart KKKK limits, shall be based on the averaging time specified in the current

version of that subpart (which on March 3, 2015 was a 30 unit operating day rolling average).

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits.

† (9 VAC 5-50-280)
†† (9 VAC 5-50-260)
††† (9 VAC 5-50-270)
†††† (9 VAC 5-60-320)

(9 VAC 5-80-490 B & C, 40 CFR Part 60 Subpart KKKK and Condition 21 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

7. For the purpose of applying the conditions of this permit, start up and shut down of the GE 7FA combustion turbines are defined in Appendix A, except as follows:

   For the purpose of applying the NOx conditions of this permit, start up of the GE 7FA combustion turbines is defined as given in Appendix A plus any additional time required for the temperature of the catalyst bed in the selective catalytic reduction (SCR) unit to reach 550 °F, the minimum temperature at which the SCR vendor has determined that the SCR can be expected to continuously meet the design efficiency.

   For the purpose of applying the NOx conditions of this permit, shut down of the GE 7FA combustion turbines is defined as given in Appendix A plus each period when the temperature of the catalyst bed in the selective catalytic reduction unit falls below the temperature used to determine "start up" and during which the temperature does not return to the start up temperature prior to the turbine temporarily ceasing to operate.
   (9 VAC 5-80-490 B & C and Condition 9 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

8. Upon completion of the Advanced Gas Path (AGP) upgrades for which the 10/05/01 PSD/Non-attainment Permit was amended 3/20/15, the duct burners will no longer be subject to 40 CFR Part 60 (NSPS), Subpart Da, but will be subject to 40 CFR Part 60, Subpart KKKK. Compliance with emission limits are demonstrated in accordance with Condition III.Q.6 above.
   (9 VAC 5-80-490 B & C, 9 VAC 5-50-410, 40 CFR Part 60 Subpart KKKK and Condition 22 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

9. For the purpose of applying the conditions of this permit, the duct burners shall be considered to be in a period of start up or shutdown only when the rate of fuel input is in a period of identifiable and continuous fluctuation immediately following the start or immediately prior to the termination of a period of operation.
   (9 VAC 5-80-490 B & C and Condition 9 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

10. Visible emissions from each of the Units 6A and 6B stacks shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible

emissions shall not exceed 27 percent opacity as determined by the EPA Method 9 (reference 40 CFR, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction
(9 VAC 5-50-410, 9 VAC 5-80-490 B & C, and Condition 27 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

11. Except where this permit is more restrictive than the applicable requirement, the Units 6A and 6B combustion turbines shall be operated in compliance with the current requirements of 40 CFR 60 (NSPS), Subpart KKKK.
(9 VAC 5-50-400, 9 VAC 5-50-410, and Condition 29 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

12. Except where this permit is more restrictive than the applicable requirement, the Units 6A and 6B duct burners shall be operated in compliance with the current requirements of 40 CFR 60 (NSPS), Subpart KKKK.
(9 VAC 5-50-400, 9 VAC 5-50-410 and Condition 30 of the 10/05/01 (last amended ) PSD/Non-attainment Permit)

*Note: Additional limitations that apply to all of the significant fuel burning equipment units are found at Section III. HH*

## R. Monitoring

1. Continuous Emission Monitoring Systems, meeting the design specifications of 40 CFR Part 75, shall be installed to measure and record the emissions of nitrogen oxides (NOx, measured as $NO_2$) as ppmvd corrected to 15% $O_2$, from the combination of each GE 7FA combustion turbine and its duct burners. The CEMS shall also measure and record the percent of oxygen in the exhaust stream. The NOx and diluent CEMS shall be co-located, installed, calibrated, maintained, audited and operated in accordance with the requirements of 40 CFR 75. For the purposes of this permit, data shall be reduced to 8-hour rolling averages for NOx.
(9 VAC 5-50-40, 9 VAC 5-80-420, 9 VAC 5-80-490 E, and Condition 36 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. Continuous Emission Monitoring Systems, meeting the design specifications of 40 CFR Part 75, shall be installed to measure and record the emissions of carbon monoxide, as ppmvd corrected to 15% $O_2$, from the combination of each GE 7FA combustion turbine and its duct burners. The CEMS shall also measure and record the percent of oxygen in the exhaust stream. The CEMS shall be co-located, installed, calibrated, maintained, audited and operated in accordance with the requirements of 40 CFR 60 except as noted in condition III.R.3. For the purposes of this permit, data shall be reduced to 3-hour rolling averages for carbon monoxide. The CEMS data for CO emissions may be grounds for DEQ to request that a stack test be performed to prove compliance, especially, but not limited to a case in which the permittee has not taken corrective action when the data indicate that a non-compliance condition may exist.
(9 VAC 5-50-40 and 9 VAC 5-80-420, 9 VAC 5-80-490 E, and Condition 36 of the 10/05/01 (amended 11/18/02, 12/8/04 and 7/11/08) PSD/Non-attainment Permit)

3. For the NOx and diluent CEMS the quality control requirements of 40 CFR Part 75 shall be met. The Quality Assurance Accuracy Specifications for CO CEMS shall be 40 CFR 60 Appendix F, Procedure 1. A linearity test for NOx and diluent, and a CGA for CO, shall be performed once per QA operating quarter (≥ 168 hours operation) not to exceed four calendar quarters. A RATA test shall be conducted once every four QA operating quarters (≥ 168 hours operation each), not to exceed eight calendar quarters. The provisions for a grace period to complete testing shall apply (40 CFR 75, Appendix B 2.2.4 & 2.3.3). Data validation shall be as defined in 40 CFR Part 75, Appendix B, 2.3.2 with the exception that missing data for CO, resulting from continuous monitor system breakdown, repair, calibration checks, and zero and span adjustments, shall be reported as monitor downtime and not substituted. No bias factor shall be applied to the CO monitored value as per 40 CFR Part 60. (Condition 39 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

4. At least once per day the permittee shall have someone visually observe the stacks of the GE 7FA combustion turbines for visible emissions when they are operating. If the observer sees an abnormally opaque flue gas plume, the permittee shall have a certified smoke reader conduct within 4 hours, or as soon thereafter as weather and lighting conditions permit, a 40 CFR Part 60, Method 9 visible emissions evaluation of the plume for a minimum of 12 minutes. An abnormally opaque flue gas plume is one that is obviously more opaque than the plume was at the time the plume was initially determined to be in compliance with the applicable visible emissions limit of the PSD/Non-attainment permit issued 10/05/01 ( last amended 3/20/15). In lieu of someone visually observing a particular stack for visible emissions, the permittee may install and operate a continuous opacity monitor that meets the design specifications of 40 CFR Part 60, Appendix B and is calibrated, maintained, and operated in accordance with the requirements of 40 CFR 60.13 and Appendix B or DEQ approved procedures that are equivalent to the requirements of 40 CFR 60.13 and Appendix B. If continuous opacity monitor(s) are installed and operated, they shall be used only to indicate the need for a Method 9 visible emissions evaluation. (9 VAC 5-50-80, 9 VAC 5-50-280, and Condition 48 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

5. The GE 7FA combustion turbines shall be equipped with devices to continuously monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine when water injection is being used to control NOx emissions. This system shall be accurate to within ±5.0 percent and shall be as approved by the NRO Air Compliance Manager. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the GE 7FA combustion turbines are operating.
(9 VAC 5-50-260, 9 VAC 5-50-410 (Subpart KKKK), and Condition 7 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

6. The Permittee shall use the NOx CEMS required at Condition III.R.1. of this permit to satisfy the requirements of 40 CFR Part 64 "Compliance Assurance Monitoring" applicable to these units.
(9 VAC 490 E and 40 CFR 64.3(b))

## S. Recordkeeping

1. The permittee shall obtain a certification from the fuel supplier with each shipment of distillate fuel oil. Each fuel supplier certification shall include the following:

   a. The name of the fuel supplier;

   b. The date on which the distillate fuel oil was received;

   c. The volume of distillate fuel oil delivered in the shipment;

   d. A statement that the distillate fuel oil was "low sulfur diesel" fuel. Low sulfur diesel fuel is defined as diesel fuel with a sulfur content equal to or less than 0.05% sulfur by weight.

   In lieu of the fuel supplier certification stating a specific sulfur content of the shipment, the permittee may demonstrate compliance with the maximum sulfur content limit of the oil to be burned in the combustion turbines by obtaining a sample analysis of each shipment of distillate oil delivered to the station. The sampling method used shall be ASTM D4294 or another ASTM method incorporated in 40 CFR 60 by reference. Sampling frequency for sulfur content shall be as specified in Section 60.4370 of Subpart KKKK.
   (9 VAC 5-50-410, 9 VAC 5-80-490 F, and Condition 19 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be agreed upon with the NRO Air Compliance Manager. These records shall include, but are not limited to:

   a. The times of operation of each GE 7FA combustion turbine when firing with distillate fuel oil.

   b. The times of operation of the duct burners for each GE 7FA combustion turbine.

   c. Hourly throughput of distillate fuel oil and natural gas to each GE 7FA combustion turbine, for purposes of calculating hourly emissions for pollutants for which there is not a continuous emissions monitor.

   d. Annual throughput of distillate fuel oil and natural gas to each GE 7FA combustion turbine, calculated monthly as the total for the most recent twelve complete calendar months.

e. Hourly throughput of natural gas to the duct burners for each GE 7FA combustion turbine, for purposes of calculating hourly emissions for pollutants for which there is not a continuous emissions monitor.

f. Annual throughput of natural gas to the duct burners for each GE 7FA combustion turbine, calculated monthly as the total for the most recent twelve complete calendar months.

g. All fuel supplier certifications.

h. All fuel sampling results and other records required by 40 CFR Part 60, Subpart KKKK, as they apply to the permitted emission units, unless explicitly waived by other conditions of this permit or by approval from the NRO Air Compliance Manager.

i. The hourly loads at which each GE 7FA combustion turbine has operated.

j. Monthly emissions calculations for PM-10, PM 2.5 sulfur dioxide ($SO_2$), nitrogen oxides (NOx), carbon monoxide (CO), VOC, and formaldehyde ($CH_2O$) from the GE 7FA combustion turbines stacks using calculation methods approved by the NRO Air Compliance Manager to verify rolling average compliance with the lb/hr, ton/yr, and ppmvd emissions limitations in Condition III.Q.6. PM-10, PM 2.5, $SO_2$, CO, VOC, and $CH_2O$ emissions are calculated hourly for the most recent three hours of operation. NOx emissions are calculated hourly for the most recent eight hours of operation. Upon completion of the AGP upgrades, NOx emissions are also calculated daily for the 30 unit operating day limit.

k. Continuous monitoring system calibrations and calibration checks, percent operating time, and excess emissions.

l. Results of the flue gas plume observations required each shift and the time and lighting conditions when the observations were conducted.

m. Results of all stack tests, visible emission evaluations and CEMS performance evaluations.

n. Maintenance records on the GE 7FA combustion turbine fuel use and water-to-fuel ratio monitors.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-490 F and Condition 35 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

3. The permittee shall maintain records of the occurrence and duration of any startup, shutdown or malfunction in the operation of these units, any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
(9 VAC 5-80-490 F and 9 VAC 5-50-50 B)

## T. Testing

1. The stacks from the Units 6A & 6B combustion turbines shall be maintained so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods.
(9 VAC 5-50-30 F, 9 VAC 5-80-490 E & F, and Condition 49 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. Beginning 12 to 24 months following the date of the last stack test of the initial compliance demonstration (following their construction), each of the Unit 6A and 6B combustion turbines shall be retested by the permittee at 21 to 27 month intervals for VOC and formaldehyde emissions; except that if the VOC emission rate is determined to be less than the formaldehyde "lbs/MMBtu" limit in this permit for the turbines, no formaldehyde test will be required during that year. If during three consecutive biennial tests, including the initial performance testing, neither turbine has tests results that show emissions at greater than 80 percent of the emission limits in Condition III.Q.6, the testing interval for each turbine may be expanded up to 63 months upon approval from the NRO Air Compliance Manager. On January 15, 2008, the NRO Air Compliance Manager approved a 63 month testing interval. If any subsequent test results in emissions of greater than 80 percent, testing at 21 to 27 month intervals shall resume. The tests for each turbine may be staggered within the schedule above, so that they are not necessarily conducted for both units in the same calendar year. The tests are to be conducted using EPA Methods 25 or 25A for VOC and CARB Method 430 for formaldehyde, or equivalent methods approved by the NRO Air Compliance Manager for either pollutant. The tests need only be conducted at the maximum load in the normal operating range and the minimum load of the normal operating range, unless the minimum load is within ten percent of the maximum load, in which case testing is required at only the maximum load. The normal operating range shall be determined from records of actual operation. Upon request by the DEQ, the permittee shall conduct additional performance tests for the GE 7FA combustion turbines to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be agreed upon with the NRO Air Compliance Manager.
(9 VAC 5-50-30 G and Condition 46 of 10/05/01 (last amended) PSD/Non-attainment Permit)

3. If testing is conducted in addition to the testing and monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ. Those procedures include submitting a test protocol to the NRO Air Compliance Manager at least 30 days prior to testing unless, due to mitigating circumstances and upon request, less than 30 days lead time is approved by the NRO Air Compliance Manager.
(9 VAC 5-80-490 E)

## U. Reporting

1. The permittee shall submit written reports to the NRO Air Compliance Manager of excess emissions from any process monitored by a continuous monitoring system

(CMS) on a quarterly basis, postmarked no later than the 30th day following the end of each calendar quarter. These reports shall include, but are not limited to the following information:

a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

b. Specific identification of each period of excess emissions that occurs during startups, shutdowns and malfunctions of the source; the nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

c. The date and time identifying each period during which the continuous monitoring system was inoperative, except for the zero and span checks and the nature of the system repairs or adjustments; and,

d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

e. Excess emissions (as defined below) shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions and monitor downtime that shall be reported in accordance with the requirements in 40 CFR Part 60 Subpart KKKK.

f. The summary report and form shall meet the requirements of 40 CFR 60.7(d).

(9 VAC 5-50-50, 9 VAC 5-50-410 and Condition 40 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit))

Note: *Additional reporting requirements for these units are included in Section IX. (Title IV Permit Allowances and Requirements).*

## AUXILIARY BOILER (ID# ES-19)

## V. Limitations

1. Nitrogen oxides (NOx) emissions from the auxiliary boiler shall be controlled by employing "low-NOx" burners.
(9 VAC 5-50-260, 9 VAC 5-80-490 B & C and Condition 4 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. The approved fuel for the auxiliary boiler is natural gas with a maximum sulfur content of 0.3 grains per 100 dry standard cubic feet. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-490 B & C and Condition 17 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

3. The auxiliary boiler shall not consume more than 489 million cubic feet of natural gas per year. Compliance with this limit shall be determined monthly as the total for the most recent twelve complete calendar months.
(9 VAC 5-80-490 B & C and Condition 12 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

4. Emissions from the operation of the auxiliary boiler shall not exceed the limits specified below, except that the short term limits do not apply for periods of start up, shutdown, or malfunction:

| Pollutant | Short-term Limit | Annual Limit |
|---|---|---|
| PM-10 | 0.7 lbs/hr † | 3.7 tons/yr † |
| Sulfur Dioxide | 0.1 lb/hr †† | 0.44 tons/yr†† |
| Nitrogen Oxides (as $NO_2$) | 0.036 lbs/million Btu †† | 18 tons/yr †† |
| Carbon Monoxide | 14.9 lbs/hr † | 74 tons/yr † |
| Volatile Organic Compounds | 0.4 lbs/hr ††† | 2.0 tons/yr ††† |

All short-term emission limits represent averages for a three-hour sampling period.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits.

† (9 VAC 5-50-280)
†† (9 VAC 5-50-260)
††† (9 VAC 5-50-270)

(9 VAC 5-80-490 B & C and Condition 24 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

5. For the purpose of applying the conditions of this permit, the auxiliary boiler shall be considered to be in a period of start up or shutdown only when the rate of fuel input is in a period of identifiable and continuous fluctuation immediately following the start or immediately prior to the termination of a period of operation.
(9 VAC 5-80-490 B & C and Condition 9 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

6. Visible emissions from the auxiliary boiler shall not exceed 10 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity. This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-80, 9 VAC 5-80-490 B & C, and Condition 28 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

7. Except where this permit is more restrictive than the applicable requirement, the auxiliary boiler shall be operated in compliance with the current requirements of 40 CFR 60, Subpart Dc. (9 VAC 5-50-400, 9 VAC 5-50-410 and Condition 30 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

*Note: Additional limitations that apply to all of the significant fuel burning equipment units are found at Section III. HH.*

## W. Monitoring

1. At least once per day, the permittee shall have someone visually observe the stack of the auxiliary boiler for visible emissions when operating. If the observer sees an abnormally opaque flue gas plume, the permittee shall have a certified smoke reader conduct within 4 hours, or as soon thereafter as weather and lighting conditions permit, a 40 CFR Part 60, Method 9 visible emissions evaluation of the plume for a minimum of 12 minutes. An abnormally opaque flue gas plume is one that is obviously more opaque than the plume was at the time the plume was initially determined to be in compliance with the applicable visible emissions limit of the PSD/Non-attainment permit issued 10/05/01(last amended 3/20/15). In lieu of someone visually observing the stack for visible emissions, the permittee may install and operate a continuous opacity monitor that meets the design specifications of 40 CFR Part 60, Appendix B and is calibrated, maintained, and operated in accordance with the requirements of 40 CFR 60.13 and Appendix B or DEQ approved procedures that are equivalent to the requirements of 40 CFR 60.13 and Appendix B. If continuous opacity monitor(s) are installed and operated, they shall be used only to indicate the need for a Method 9 visible emissions evaluation.
(9 VAC 5-50-80, 9 VAC 5-50-280, and Condition 48 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

## X. Recordkeeping

1. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be agreed upon with the NRO Air Compliance Manager. These records shall include, but are not limited to:

   a. Hourly throughput of natural gas to the auxiliary boiler, for purposes of calculating hourly emissions.

   b. Annual throughput of natural gas to the auxiliary boiler, calculated monthly as the total for the most recent twelve complete calendar months.

   c. All records required by 40 CFR Part 60, Subpart Dc, as they apply to the permitted emission unit, unless explicitly waived by other conditions of this permit or by approval from the NRO Air Compliance Manager.

   d. Monthly emissions calculations for PM-10, sulfur dioxide, nitrogen oxides, carbon monoxide and VOC from the auxiliary boiler, using calculation methods approved by the NRO Air Compliance Manager to verify compliance with the lb/hr and ton/yr emissions limitations in Conditions III.V.4.

   e. Results of the flue gas plume observations required each shift and the time and lighting conditions when the observations were conducted.

   f. Results of all stack tests and visible emission evaluations.

   These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
   (9 VAC 5-80-490 F, 9 VAC 5-50-410 (Subpart Dc) and Condition 35 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

## Y. Testing

1. The stack from the auxiliary boiler shall be maintained so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods.
   (9 VAC 5-50-30 F, 9 VAC 5-80-490 E & F, and Condition 49 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. Beginning no later than five years following the date of the last stack test of the initial compliance demonstration, the auxiliary boiler shall be retested by the permittee at least once every five years for nitrogen oxides and carbon monoxide using U.S. EPA reference methods 7, 7A, or 7E, and 10, to determine compliance with the emission limits contained in Condition III.V.4. Should an application shield be in place and the renewed permit has not been issued, the requirement for testing on each boiler at a frequency of no less than every five calendar years continues in effect as if the permit had been renewed. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests are to be agreed upon with the NRO Air Compliance Manager. The permittee shall

submit a test protocol with two copies at least 30 days prior to testing for review by the NRO Air Compliance Manager. Two copies of the test results (one hard and one electronic) shall be submitted to the NRO Air Compliance Manager within 45 days after test completion and shall conform to the test report format enclosed with this permit. Fuel throughput-based emission factors that can be compared to hourly fuel throughput data for future emission limit compliance determinations shall be calculated from the test results for nitrogen oxides and carbon monoxide and included in the report. Upon request by DEQ, the permittee shall conduct additional performance tests for the auxiliary boilers to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be agreed upon with the NRO Air Compliance Manager.
(9 VAC 5-80-490 E and Condition 47 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

3. If testing is conducted in addition to the testing and monitoring specified in this permit, the permittee shall use test methods and procedures approved by the NRO Regional Air Compliance Manager:

| Pollutant | Test Method (40 CFR Part 60, Appendix A) |
|---|---|
| VOC | EPA Methods 25 |
| NOx | EPA Method 7, 7A, 7E |
| SO2 | EPA Method 6 |
| CO | EPA Method 10 |
| PM/PM10 | EPA Methods 5, 17 |
| Visible Emission | EPA Method 9 |

(9 VAC 5-80-490 E)

## Z. Reporting

Except as provided below (Section III.AA.), there are no specific requirements.

## AA. Applicable Requirements from 40 CFR 63, Subpart DDDDD

**Fuel Burning Equipment Requirements – Limitations** – The auxiliary boiler (ES-19), shall comply with the applicable requirements of National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters as follows:

1. Pursuant to 40 CFR §63.7495, the compliance date for Subpart DDDDD is January 31, 2016.
2. The permittee shall submit the required notifications specified in 40 CFR §63.7545;
3. At all times, the permittee shall operate and maintain the affected units and any associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions;
4. The permittee shall demonstrate compliance for the for the affected sources by

completing an initial tune-up following the procedures described in §63.7540 and a one-time energy assessment as specified in Table 3 to 40 CFR Part 63 Subpart DDDDD;

5. Subsequent tune-ups shall be performed annually for these sources;
6. After the compliance date, the permittee shall demonstrate continuous compliance via the methods specified in 40 CFR §63.7540.10;
7. The permittee shall comply with all applicable recordkeeping requirements specified in 40 CFR §63.7555 and 40 CFR §63.7560

(9 VAC 5-80-490 and 40 CFR 63 Subpart DDDDD)

## NATURAL GAS PIPELINE HEATERS (ID#'s ES-17 and 18)

### BB. Limitations

1. The approved fuel for the natural gas pipeline heaters is natural gas with a maximum sulfur content of 0.3 grains per 100 dry standard cubic feet. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-490 B & C and Condition 16 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. The 17.37 million Btu per hour natural gas pipeline heater shall not consume more than 150 million cubic feet of natural gas per year and the 11.85 million Btu per hour natural gas pipeline heater shall not consume more than 102 million cubic feet of natural gas per year. Compliance with these limits shall be determined monthly as the total for the most recent twelve complete calendar months.
(9 VAC 5-80-490 B & C and Condition 13 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

3. Emissions from the operation of the 17.37 MMBtu/hr pipeline heater shall not exceed the limits specified below:

| Pollutant | Short-term Limit | Annual Limit |
|---|---|---|
| Nitrogen Oxides (as $NO_2$) | 1.4 lbs/hr | 6.1 tons/yr |
| Carbon Monoxide | 1.5 lbs/hr | 6.3 tons/yr |

All hourly emission limits represent averages for a three-hour sampling period.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits.

(9 VAC 5-50-260 and Condition 25 of the 10/05/01 (amended 11/18/02 and 12/8/04) PSD/Non-attainment Permit)

4. Emissions from the operation of the 11.85 MMBtu/hr pipeline heater shall not exceed the limits specified below:

| Pollutant | Short-term Limit | Annual Limit |
|---|---|---|
| Nitrogen Oxides (as $NO_2$) | 1.0 lbs/hr | 4.2 tons/yr |
| Carbon Monoxide | 1.1 lbs/hr | 4.7 tons/yr |

All hourly emission limits represent averages for a three-hour sampling period.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits.
(9 VAC 5-50-260 and Condition 26 of the 10/05/01 (amended 11/18/02 and 12/8/04) PSD/Non-attainment Permit)

5. For the purpose of applying the conditions of this permit, the pipeline heaters shall be considered to be in a period of start up or shutdown only when the rate of fuel input is in a period of identifiable and continuous fluctuation immediately following the start or immediately prior to the termination of a period of operation.
(9 VAC 5-80-490 B & C and Condition 9 of the 10/05/01 (last amended ) PSD/Non-attainment Permit)

6. Visible emissions from the pipeline heaters shall not exceed 10 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity. This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-80, 9 VAC 5-80-490 B & C, and Condition 28 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

7. Except where this permit is more restrictive than the applicable requirement, the natural gas pipeline heaters shall be operated in compliance with the current requirements of 40 CFR 60, Subpart Dc.
(9 VAC 5-50-400, 9 VAC 5-50-410 and Condition 31 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

*Note: Additional limitations that apply to all of the significant fuel burning equipment units are found at Section III. HH.*

## CC. Monitoring

At least once per day, the permittee shall have someone visually observe the stacks of the pipeline heaters for visible emissions when operating. If the observer sees an abnormally opaque flue gas plume, the permittee shall have a certified smoke reader

conduct within 4 hours, or as soon thereafter as weather and lighting conditions permit, a 40 CFR Part 60, Method 9 visible emissions evaluation of the plume for a minimum of 12 minutes. An abnormally opaque flue gas plume is one that is obviously more opaque than the plume was at the time the plume was initially determined to be in compliance with the applicable visible emissions limit of the PSD/Non-attainment permit issued 10/05/01(last amended 3/20/15). In lieu of someone observing the stack for visible emissions, the permittee may install and operate a continuous opacity monitor that meets the design specifications of 40 CFR Part 60, Appendix B and is calibrated, maintained, and operated in accordance with the requirements of 40 CFR 60.13 and Appendix B or DEQ approved procedures that are equivalent to the requirements of 40 CFR 60.13 and Appendix B. If continuous opacity monitor(s) are installed and operated, they shall be used only to indicate the need for a Method 9 visible emissions evaluation.
(9 VAC 5-50-80, 9 VAC 5-50-280, and Condition 48 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

## DD. Recordkeeping

1. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be agreed upon with the NRO Air Compliance Manager. These records shall include, but are not limited to:

   a. Annual throughput of natural gas to each natural gas pipeline heater, calculated monthly as the total for the most recent twelve complete calendar months.

   b. Monthly emissions calculations for nitrogen oxides and carbon monoxide from the natural gas pipeline heaters using calculation methods approved by the NRO Air Compliance Manager to verify compliance with the lb/hr and ton/yr emissions limitations in Conditions III.BB.3 and BB.4.

   c. All records required by 40 CFR Part 60, Subpart Dc, as they apply to the permitted emission unit, unless explicitly waived by other conditions of this permit or by approval from the NRO Air Compliance Manager.

   d. Results of the flue gas plume observations required each shift and the time and lighting conditions when the observations were conducted.

   e. Results of all stack tests and visible emission evaluations.

   These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
   (9 VAC 5-80-490 F, 9 VAC 5-50-410 (Subpart Dc) and Condition 35 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

## EE. Testing

1. Test ports shall be provided when requested at the flues or stacks of the natural gas pipeline heaters in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).

(9 VAC 5-50-30 F, 9 VAC 5-80-490 E & F, and Condition 49 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. If testing is conducted in addition to the testing and monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ. Those procedures include submitting a test protocol to the NRO Air Compliance Manager at least 30 days prior to testing unless, due to mitigating circumstances and upon request, less than 30 days lead time is approved by the NRO Air Compliance Manager.
(9 VAC 5-80-490 E)

## FF. Reporting

Except as provided below (Section III.AA.), there are no specific requirements.

## GG. Applicable Requirements from 40 CFR 63, Subpart DDDDD

**Fuel Burning Equipment Requirements – Limitations** – The natural gas pipeline heaters (ID#'s ES-17 and ES-18), shall comply with the applicable requirements of National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters as follows:

1. Pursuant to 40 CFR §63.7495, the compliance date for Subpart DDDDD is January 31, 2016.
2. The permittee shall submit the required notifications specified in 40 CFR §63.7545;
3. At all times, the permittee shall operate and maintain the affected units and any associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions;
4. The permittee shall demonstrate compliance for the for the affected sources by completing an initial tune-up following the procedures described in §63.7540 and a one-time energy assessment as specified in Table 3 to 40 CFR Part 63 Subpart DDDDD;
5. Subsequent tune-ups shall be performed annually for these sources;
6. After the compliance date, the permittee shall demonstrate continuous compliance via the methods specified in 40 CFR §63.7540.10;
7. The permittee shall comply with all applicable recordkeeping requirements specified in 40 CFR §63.7555 and 40 CFR §63.7560

9 VAC 5-80-490 and 40 CFR 63 Subpart DDDDD)

**ALL SIGNIFICANT FUEL BURNING UNITS (COMBINATIONS OF ID#'s ES-3, ES-4, ES-5, ES-6, ES-7, ES-8, ES-9, ES-10, ES-11, ES-13, ES-14, ES-15, ES-16, ES-17, ES-18, and ES-19)**

## HH. Limitations

1. Sulfur dioxide ($SO_2$) emissions from the combination of Units 3, 4, 5, 6, 7, 8, 9, 10, and 11 (ID#'s ES-3, ES-4, ES-5, ES-6, ES-7, ES-8, ES-9, ES-10 & ES-11) shall not exceed 14,278 pounds per hour. Compliance with this limit shall be demonstrated by demonstrating compliance with Condition III.F.5 through means prescribed at Condition III.G.1. and by maintaining on site, available for inspection, a mathematics-based analysis showing that if all the units are operating at 145 percent of design capacity (the permittee may use a higher percent in the analysis) and Unit #5 is in compliance with Condition III.F.5, that the limit of this condition is not violated.
(9 VAC 5-80-490 B & C and 5-40-930 A.2 and C)

2. Nitrogen oxides (NOx) emissions from the combination of Units 3, 4, 5, and 6A and 6B, (ID#'s ES-3, ES-4, ES-5, ES-13 & ES-14) shall not exceed 1,045 tons (measured as $NO_2$) during each period of May 1 through September 30. If approved by the NRO Air Compliance Manager, the permittee may comply with this condition through obtaining credits for NOx emissions reductions occurring at other facilities within the Washington, DC ozone nonattainment area, so long as the reductions for which the credits have been obtained have not been used to satisfy other emissions reduction requirement(s). If the Regulations of the Commonwealth of Virginia State Air Pollution Control Board are amended pursuant to Section 10.1-1328 of the Code of Virginia, such that a more stringent limit is imposed, including a restriction on compliance by obtaining offsite reduction credits, the more stringent limit shall take precedence, as soon as the new regulatory limit becomes effective or earlier by written agreement from the permittee to DEQ.
(Section 110 of the U.S. Clean Air Act; letter dated February 20, 2003, from John M. Daniel, Jr., of DEQ, to Pamela F. Faggert of Dominion; and, Section 10.1-1328 of the Code of Virginia)

3. Nitrogen oxides (NOx) emissions from the combination of Units 3, 4, 5, 6, 7, 8, 9, 10, 11, 6A and 6B (ID#'s ES-3, ES-4, ES-5, ES-6, ES-7, ES-8, ES-9, ES-10, ES-11, ES-13 & ES-14) and any other NOx emitting unit which provides energy utilized for electric power generation and which is located on the same property (including any constructed during the term of this permit) shall not exceed the following limit (measured as $NO_2$) during each period of May 1 through September 30 (ozone season):

   0.15 pounds per million Btu's of heat (fuel) input, averaged over every period of 30 consecutive operating days which occurs wholly within the ozone season.

   Compliance with this condition shall be demonstrated with the following equation:

   $\Sigma_i$(Actual 30-day NOx Emissions) ÷ $\Sigma_i$ (Actual 30-day Heat input) *Input*) ≤ 0.15 lb-$NO_X$/$10^6$ Btu

   where: $\Sigma_i$ is the sum of all *i* units;
   *i* is each subject unit;

Actual 30-day NOx Emissions are the total NOx emissions (measured as if converted to $NO_2$) in pounds during any 30 consecutive operating days;

Actual 30-day Heat Input is the total heat input in millions of Btu's for the same 30-day period as the emissions data.

An operating day is any calendar day that one or more emission units operate for one hour or more.

Each 30 consecutive days period need not include any day during which there was a forced outage of a unit that is essential to maintaining compliance with the 0.15 lbs. NOx per million Btu's cumulative average emission limit and for which total facility NOx emissions were no more than 27 tons. For this condition, "forced outage," means an unplanned removal of a unit from service, usually resulting from mechanical, electrical, hydraulic, environmental control systems trips, malfunctions, or operator-initiated trips in response to unit alarms. There shall not be more than 14 excluded days per rolling "30-day" compliance period. This means that an acceptable "30-day" compliance period can exceed 30 calendar days, but in no event, more than 44 calendar days. The 14 excluded days allowance notwithstanding, the permittee shall make a diligent effort to return the forced outage unit to service expeditiously and minimize the number of days excluded from the rolling 30-day period over which compliance with the pounds per million Btu limit is determined. The method of determining the data (NOx emissions and heat inputs) to insert into the equation above shall be in accordance with Title 40, Part 75, Appendix F, Section 8.1 of the Code of Federal Regulations (40 CFR Part 75 App.F, 8.1), except that the hourly rates determined by Section 8.1 shall be summed to give 30-day totals. The collection of continuous emissions monitoring data from which the equation inputs are derived shall conform to 40 CFR Part 75. Compliance with the NOx monitoring requirements for the permittee's Phase-II Acid Rain (40 CFR Part 75) portion of this permit (Section IX. Title IV Permit Allowances and Requirements) shall be considered compliance with the monitoring requirements of the remainder of this permit. NOx emissions from the Units 6, 7, 8, 9, 10, and 11 turbines (not Units 6A & B) may alternatively be determined using a DEQ-approved NOx emission factor for simple cycle combustion turbines multiplied by the actual heat input (derived from the fuel throughput multiplied by the heating value of the fuel). As an alternative to compliance with the preceding requirements of this condition, the permittee may comply with 40 CFR Part 97 or a regulation of the Board approved by EPA as meeting the requirements of 40 CFR Part 96. This condition may be implemented for the units covered by either of the cited regulations once they become effective. The DEQ reserves the right to amend the 9/26/00 State Operating Permit (Ozone Attainment) from which this condition derives, as may be necessary should DEQ determine that use of this alternative compliance measure will prevent the attainment or maintenance of the air quality standards in the Washington, DC Ozone Nonattainment Area. If the 9/26/00 permit is amended during the term of this permit, any requirements of the amended permit that are more stringent than those of this condition shall take precedence over those of this condition and shall be presumed to be part of this permit. Furthermore, any other NOx emission limits in this permit are still enforceable, regardless of how compliance is achieved for this condition. (9 VAC 5-80-490 B & C and Conditions 3 and 8 of the 9/26/00 State Operating Permit (Ozone Attainment))

4. The permittee shall be responsible for ensuring that there is a permanent reduction in volatile organic compound (VOC) emissions at the Glen Burnie Division of Quebecor Printing Memphis, Inc., printing facility in Glen Burnie, Maryland of at least 114 tons per year from the annual average VOC emission rate of the years 1993 and 1994 (the last two typical years that the Glen Burnie facility has operated).
(9 VAC 5-80-490 B and Condition 50 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

## II. Recordkeeping

1. The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with Condition III.HH.1. of this permit. The content and format of such records shall be agreed upon with the NRO Air Compliance Manager. These records shall include, but are not limited to:

   a. The highest SO2 emission rate recorded for any hour during each quarter by the CEMS for Unit 5 or calculated for Unit 5 by a method approved by the NRO Air Compliance Manager;

   b. The mathematics-based analysis required in Condition III.HH.1.

   c. Results of fuel sampling and/or fuel certifications for each shipment of fuel oil, including the sulfur and heat content, exhibited in a manner that readily shows upon inspection that the inputs assumed for the mathematics-based analysis required in Condition III.HH.1 are valid.

   (9 VAC 5-40-50 and 9 VAC 5-80-490 F)

2. The records kept by the permittee to comply with the Conditions of Sections HH., II., and JJ. shall be available on site for inspection by the DEQ and shall be current for at least the most recent five years.
(9 VAC 5-80-490 F and Condition 7 of the 9/26/00 State Operating Permit (Ozone Attainment))

3. The permittee shall maintain at the permitted facility a copy of the following document, and any supporting documentation. The document is the official document from the State of Maryland that was provided to the NRO Air Permit Manager indicating that the State of Maryland recognizes the reduction secured by the permittee to comply with Condition III.HH.4 as creditable and permanent. At a minimum the document shall state that the emission reduction has not been and will not be credited toward another reduction requirement and that the emissions cannot be resurrected from the same facility without the owner first obtaining a permit under a federally-enforceable new source review program. The document must also provide evidence that the U.S. EPA accepts that the emission reductions are creditable for offset purposes.
(9 VAC 5-80-490 F and Conditions 51 and 52 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

## JJ. Reporting

1. A report presenting the results of the NOx monitoring for each ozone season in a manner that facilitates compliance assessment with Conditions III.HH.2 and 3 shall be submitted to the NRO Air Compliance Manager on or before November 15 of the same year. If not previously presented to DEQ, the next report shall include a copy of each ASTM, ASME or other methodology standard that is required to demonstrate compliance, but is not published in the Virginia or federal regulations. Any change in a standard should be presented in the first report following the change. Unless a paper copy is specifically requested by the DEQ, the permittee shall submit the report only on electronic media (e.g., CD-ROM or DVD) in a file format approved by the NRO Air Compliance Manager. The report must be accompanied by a signed document certification form. At a minimum, the report shall contain the following:

   a. A statement at the beginning regarding whether the facility was in compliance with the NOx limits of Condition III.HH.2 and 3;

   b. The total tons of NOx emitted from each of the Units 3, 4, 5, 6A and 6B and from all of them combined for each calendar month and the total ozone season (May 1 through September 30)

   c. Which of the methods allowed by Condition III.HH.3 (average NOx emission rate or compliance with a cap under 40 CFR Part 97 or State Air Pollution Control Board regulations pursuant to 40 CFR Part 96) was used to establish compliance with Condition III.HH.3;

   d. All 30-day rolling average NOx emission rates for the station, regardless of method of compliance with Condition III. HH.3;

   e. The dates of any days for which data was not included in a 30-day rolling average due to a forced outage;

   f. Who at DEQ was notified in the event of a forced outage for which days were not included in the average;

   g. What action was taken to expeditiously return the forced outage unit(s) to service;

   h. If emissions are not obtained by 40 CFR Part 75 continuous emissions monitoring for combustion turbine Units 6, 7, 8, 9, 10 and 11, the equation(s) used to calculate the emissions along with the emission factor, heating value of the fuel, fuel throughput, and how these variables were determined for each rolling 30-day average.

   Details of the format and process for submission of the report shall be as acceptable to the NRO Air Compliance Manager in conformance with DEQ policy at the time, which may include submission on electronic media.
   (9 VAC 5-80-490 F, Condition 5 of the 9/26/00 State Operating Permit (Ozone Attainment).

2. Within four business hours of the beginning of any period of forced outage during the months of May through September of a unit that is essential to maintaining compliance with the 0.15 lbs NOx per million Btu's cumulative average emission limit in Condition III. HH.3, the permittee shall notify the Northern Regional Office of the DEQ. In addition, the permittee shall provide to the NRO Air Compliance Manager a written statement within 14 days, which explains the nature of the forced outage, corrective action taken, and the number of calendar days which were, or are still likely to be, excluded from the rolling 30-day compliance demonstration averages. Compliance with this reporting requirement does not relieve the facility of its obligation to continue to comply with the 0.15 lbs NOx per million Btu's cumulative average emission limit and, if applicable, the 27 tons daily cap in Condition III. HH.3. (9 VAC 5-80-490 F, 9 VAC 5-20-180 and Condition 6 of the 9/26/00 State Operating Permit (Ozone Attainment))

3. If the DEQ determines, by any means, that the reductions required by Condition III. HH.4 are no longer valid for the purposes of this permit in accordance with 9 VAC 5-80-2120, the permittee shall demonstrate to the NRO Air Compliance Manager that this situation has been corrected within sixty days of receiving notice from the NRO Air Compliance Manager of this determination.
(9 VAC 5-80-490 G)

## PERMANENTLY SHUTDOWN FUEL BURNING EQUIPMENT

### KK. Limitations

Reactivation of the shut down Unit 1 or Unit 2 boiler would be subject to the provisions of 9 VAC 5 Chapters 50 and 80.
(9 VAC 5-80-490 B & C and Condition 8 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

## ENGINES (ID#'s ES-21, ES-22, and ES-23)

### LL. Limitations

1. For the diesel engines (ID#'s ES-21, ES-22, and ES-23) the permittee shall meet the following requirements:

   a. Change oil and filter every 500 hours of operation* or annually, whichever comes first.

   b. Inspect air cleaner every 1,000 hours of operation* or annually, whichever comes first, and replace as necessary;

   c. Inspect all hoses and belts every 500 hours of operation* or annually, whichever comes first, and replace as necessary.

d. Non-resettable hour meter must be installed

e. Operate and maintain emergency stationary RICE according to manufacturer's instructions or implement a maintenance plan that provides for the maintenance and operation in a manner consistent with good air pollution control practices for minimizing emissions.

*Except during start up.

The permittee has the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in item a. above. The permittee can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices to items b. and c. above.
(40 CFR Part 63, Subpart ZZZZ, Table 2c.1; and 40 CFR §63.6625)

2. During periods of startup the permittee shall minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. The permittee can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices
(40 CFR Part 63, Subpart ZZZZ, Table 2c.1)

3. The fuel for the diesel engines (ID#'s ES-21, ES-22, and ES-23) shall have a maximum sulfur content of 15 ppm (0.0015%); and, shall have a minimum cetane index of 40 or maximum aromatic content of 35 volume percent. If and when the applicable fuel requirements of 40 CFR Part 63, Subpart ZZZZ, differ from these, the new requirements shall apply.
(40 CFR §63.6604(b))

4. The diesel engines (ID#'s ES-21, ES-22, and ES-23) have no time limit on use for emergency operation. These engines may operate up to 100 hours per year for maintenance and testing of which 50 hours (of the 100) per year can be non-emergency operation, so long as it is not for peak shaving or non-emergency demand response or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another utility.
(40 CFR §63.6640(f))

## MM. Monitoring

The permittee shall meet the applicable requirements of 40 CFR §63.6625, §63.6635, and §63.6640.
(40 CFR Part 63, Subpart ZZZZ)

## NN. Recordkeeping

The permittee shall meet the applicable requirements of 40 CFR §63.6655 and §63.6660.
(40 CFR Part 63, Subpart ZZZZ)

## OO. Reporting

The permittee shall meet the applicable requirements of 40 CFR §63.6645 and §63.6650.
(40 CFR Part 63, Subpart ZZZZ)

## IV. Process Equipment Requirements

### ABOVE GROUND STORAGE TANK (ID# ES-26)

### A. Limitations

The 2 million gallon, above ground storage tank (ID# ES-26) shall store only distillate fuel oil or other petroleum-based liquids that have a true vapor pressure equal to or lower than that of distillate fuel oil.
(9 VAC 5-80-490 B & C, Condition 20 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

### B. Monitoring and Recordkeeping

The permittee shall maintain records of the type of fuel and date for each time fuel is added to the 2 million gallon above ground storage tank (ID# ES-26). These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.
(9 VAC 5-80-490 E and F)

## SOLVENT CLEANING OPERATIONS (ID#'s ES-30, ES-31, and ES-32)

### C. Limitations

1. The cold cleaning machines (ID#'s ES-30, ES-31 and ES-32) shall be operated in accordance with the following procedures:

   a. Waste solvent shall be collected and stored in closed containers. The closed containers may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.

   b. Cleaned parts shall be drained at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping or rotating, the parts shall be positioned so that solvent drains directly back to the cold cleaning machine.

   c. Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaning machine. The solvent spray shall be a solid fluid stream, not an atomized or shower spray.

   d. The permittee shall ensure that when the cover is open the cold cleaning machine is not exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between 1 and 2 meters (3.3 and 6.6 feet) upwind and at the same elevation as the tank lip.

   e. Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the cold cleaning machine.

   f. When a pump-agitated solvent bath is used, the agitator shall be operated to produce a rolling motion of the solvent with no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.

   g. Spills during solvent transfer and use of the cold cleaning machine shall be cleaned up immediately, and the wipe rags or other sorbent material shall be immediately stored in covered containers for disposal or recycling.

   h. Work area fans shall be located and positioned so that they do not blow across the opening of the degreaser unit.

   i. The permittee shall ensure that the solvent level does not exceed the fill line.

   (9VAC5-40-6840)

2. The permittee shall not use in a cold cleaning machine any solvent with a vapor pressure of 1.0 millimeter of mercury (mm Hg) or greater, measured at 20 degrees Centigrade (68 degrees Fahrenheit) containing volatile organic compounds. (9VAC5-40-6840)

## D. Recordkeeping

1. With respect to a cold cleaning machine, the permittee shall maintain for not less than two years and shall provide to the board, on request, the following information:

   a. The name and address of the solvent supplier.

   b. The type of solvent including the product or vendor identification number.

   c. The vapor pressure of the solvent measured in mm Hg at 20 degrees Centigrade (68 degrees Fahrenheit.

   An invoice, bill of sale, certificate that corresponds to a number of sales, Material Safety Data Sheet (MSDS), or other appropriate documentation acceptable to the board may be used to comply with this condition.
   (9VAC5-40-6840)

## V. Facility Wide Conditions

### A. Limitations

Fugitive emission controls shall include the following, or equivalent, as a minimum:

Volatile organic compounds shall not be intentionally spilled, discarded to sewers, stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution control practices for minimizing emissions.

(9 VAC 5-50-270 and Condition 6 of 10/05/01 (last amended 3/20/15) PSD/Nonattainment Permit)

### B. Exceptions

1. The following applies only to emission units covered by the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit (ID#'s ES-3, ES-4, ES-13, ES-14, ES-17, ES-18, ES-19, and ES-26. Except as explicitly granted in this permit, exceptions to the requirements by reference and to other applicable permits, on the basis that the requirements of this permit are more restrictive or that explicitly proposed alternative measures are equivalent in function, are only valid if approved by the NRO Air Compliance Manager and, for requirements of 40 CFR Part 60, by written authorization from the U.S. EPA Region-III office.
(Condition 34 of the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

2. Exempted from the requirements of 9 VAC 5 Chapter 40, Article 4 for both volatile organic compounds (VOC) and nitrogen oxides (NOx) are the following:

   a. Process operations with a process weight rate capacity less than 100 pounds per hour;

   b. Any combustion unit using solid fuel with a maximum heat input of less than 350,000 Btu per hour;

   c. Any combustion unit using liquid fuel with a maximum heat input of less than 1,000,000 Btu per hour;

   d. Any combustion unit using gaseous fuel with a maximum heat input of less than 10,000,000 Btu per hour.

   (9 VAC 5-40-240 and Condition 11 of 7/21/00 State Operating Permit (NOx RACT))

## C. Recordkeeping

The permittee shall maintain sufficient documentation to support any permittee claims that units on site are exempt from Reasonably Available Control Technology requirements, especially, but not limited to, claims of exemption for Units 6, 7, 8, 9, 10, and 11 (ID#'s ES-6, ES-7, ES-8, ES-9, ES-10, and ES-11) as presented in Section VII of this permit.
(9 VAC 5-80-490 E and Condition 14 of 7/21/00 State Operating Permit (NOx RACT))

## D. Relationship of Consent Decree

The Consent Decree entered by the United States District Court for the Eastern District of Virginia, Civil Action Nos. 03-CV-517-A and 03-CV-603-A, on October 10, 2003 between Virginia Electric and Power Company and the United States of America, et al. (the "Consent Decree"), as such Consent Decree might be amended or modified from time to time in accordance with its terms, is incorporated in its entirety into this permit by reference and is attached as Appendix C to this permit. The permittee's obligations under this permit shall be to comply with the terms and conditions of the Consent Decree that relate to the operation and permitting of Possum Point Power Station exclusively, and such compliance shall be determined exclusively by reference to the terms and conditions of the Decree. Whenever any conflict or ambiguity arises between the Consent Decree and this permit, the terms and conditions of the Consent Decree control. Where related provisions between the two documents are not in conflict, but one is more stringent than the other, the more stringent provision shall prevail. Compliance with the monitoring, recordkeepoing, reporting, testing and compliance certification requirements in the Consent Decree that relate to the operation of Possum Point Power Station shall be deemed to satisfy the monitoring, recordkeeping, reporting, testing, and compliance certification requirements of this permit arising out of the terms and conditions of the Consent Decree. The provisions of Paragraph 136 of the Consent Decree, but not those provisions exclusively, shall be complied with whenever relevant to DEQ air emissions permitting actions pertaining to the Possum Point Power Station.

## VI. Insignificant Emission Units

The following emission units at the facility are identified in the application and supplemental information as insignificant emission units under 9 VAC 5-80-720:

| Emis-sion Unit No. | Emission Unit Description | Reason and Citation (see footnotes) | Pollutant(s) Emitted (9 VAC 5-80-720 B) | Rated Capacity (9 VAC 5-80-720 C) |
|---|---|---|---|---|
| IS-4 | Lube Oil Systems/Waste OilSystems/Hydraulic Oil Systems | Emission Level†† | VOC | NA |
| IS-8 | Gasoline Tank | Emission Level†† | VOC | 3,000 gallons |
| IS-9 | Kerosene Tank | Emission Level†† | VOC | 2,000 gallons |
| IS-10 | Combustion Turbine No.3 & No. 4 Blackstart Diesel Generator Fuel Tank | Size/capacity††† | VOC | 110 gallons |
| IS-12 | Oily Waste Pond | Emission Level†† | VOC | 450,000 gallons |
| IS-14 | Ash Storage Ponds | Emission Level†† | $PM_{10}$ | NA |
| IS-15 | Fuel Additive System | Emission Level†† | VOC | NA |
| IS-16 | No.2 Fuel Oil Truck Unloading/Loading Station | Emission Level†† | VOC | NA |
| IS-21 | Cooling System (Unit 6) | Emission Level†† | $PM_{10}$ | ~190,000 gallons/min |
| IS-22 | Cooling System (Unit 5) | Emission Level†† | $PM_{10}$ | ~330,000 gallons/min |
| IS-23 | Vehicle Diesel Fuel Tank | Emission Level†† | VOC | 5,000 gallons |
| IS-24 | Emergency Diesel Firepump Tank | Emission Level†† | VOC | 1,000 gallons |

† 9 VAC 5-80-720 A.
†† 9 VAC 5-80-720 B.
†††9 VAC 5-80-720 C.

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, monitoring, recordkeeping and reporting shall not be required for these emission units in accordance with 9 VAC 5-80-490 C, E, and F .

## VII. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

| Citation | Title of Citation | Description of Applicability |
|---|---|---|
| 9 VAC 5-40-310 B | Demonstration of NOx RACT | The Unit 6, 7, 8, 9, 10 & 11 combustion turbines (ID#'s ES 6 through ES-11) are exempted by 9 VAC 5-40-311-3a from demonstrating NOx RACT, because the annual capacity factors are less than 5%. RACT means Reasonably Available Control Technology as defined at 9 VAC 5-40-250 C. This exemption also applies to other types of emission units listed under 9 VAC 5-40-311C.3 and is also stated in Condition 12 of the 7/21/00 State Operating Permit (NOx RACT). If the capacity factor of any of the exempted units exceeds 5% during any calendar year, the exemption ceases for the unit three months after that calendar year. |
| 40 CFR 68 | Chemical Accident Prevention Provisions | This does not apply to the ammonia tanks for the SCR control on Units 6A & B, because the ammonia is in aqueous solution at a concentration of less than 20%, which is specifically exempted by 40 CFR Part 68 §130 (b) |
| 40 CFR 60, Subpart Kb | Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) | Although the 2 million gallon distillate fuel oil storage tank, emission unit ID# ES-26 was originally affected by this Subpart when it was permitted under the 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit), the rule has been revised to exempt all tanks containing liquids of vapor pressure less than 3.5 kPa, which this tank does. The other large storage tanks on site are exempt from Subparts Ka and Kb, because the tanks were constructed prior to May 18, 1978. |
| 40 CFR 63, Subpart ZZZZ, §63.6595 through §63.6670 and the appendices | National Emissions Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines | The stationary diesel engines, including the fire pump engine (ES-20), are subject to Subpart ZZZZ per §63.6585, but §63.6590(b)(3)(iii) states that an existing emergency stationary RICE (which according to §63.6675 includes a "RICE used to pump water in the case of fire") rated at over 500 brake HP at a major source of HAP that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), does not have to meet the requirements of this subpart. (emphasis added) So, the fire pump engine, and only the fire pump engine, does not have to meet requirements of Subpart ZZZZ. |

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-500)

## VIII. General Conditions

### A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-490 N )

### B. Permit Expiration

1. This permit has a fixed term of five years. The expiration date shall be the date five years from the effective date of the permit, as stated on the signature page for Title IV purposes. Unless the owner submits a timely and complete renewal application to DEQ consistent with 9 VAC 5-80-430, the right of the facility to operate shall terminate upon permit expiration.

2. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

3. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 3, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-510.

4. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-430 for a renewal permit, except in compliance with a permit issued under Article 3, Part II of 9 VAC 5 Chapter 80.

5. If an applicant submits a timely and complete application under section 9 VAC 5-80-430 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-500 , shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

6. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-430 shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-430 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.
(9 VAC 5-80-430 B, C and F, 9 VAC 5-80-490 D and
9 VAC 5-80-530 B)

## C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

   a. The date, place as defined in the permit, and time of sampling or measurements.
   b. The date(s) analyses were performed.
   c. The company or entity that performed the analyses.
   d. The analytical techniques or methods used.
   e. The results of such analyses.
   f. The operating conditions existing at the time of sampling or measurement.
   (9 VAC 5-80-490 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
   (9 VAC 5-80-490 F )

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year, except that the report required at Condition III. HH.1 shall be submitted no later than November 15 of each calendar year. These reports must be signed by a responsible official, consistent with 9 VAC 5-80-430 G and shall include:

   a. The time period included in the report. The time periods to be addressed are January 1 to June 30, inclusive, and July 1 to December 31, inclusive, except that the time period to be addressed in the report required at Condition III. HH.1 is May 1 to September 30, inclusive.

   b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:

      - Exceedance of emissions limitations or operational restrictions,

      - Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,

      - Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

   c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from

permit requirements occurred during this semi-annual reporting period."

(9 VAC 5-80-490 F )

## D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with VAC 5-80-430 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.

2. A description of the means for assessing or monitoring the compliance of the source with its emissions limitations, standards, and work practices.

3. The identification of each term or condition of the permit that is the basis of the certification.

4. Consistent with subsection 9 VAC 5-80-490 E, the method or methods used for determining the compliance status of the source at the time of certification and over the certification period.

5. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

6. The status of compliance with the terms and conditions of this permit for the certification period.

7. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be sent to EPA at the following electronic address:

R3_APD_Permits@epa.gov

(9 VAC 5-80-490 K.5)

## E. Permit Deviation Reporting

The permittee shall notify the Director, Northern Region within four daytime business hours, after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition VIII.C.3. of this permit.
(9 VAC 5-80-490 F.2 )

## F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after discovery, notify the NRO Air Compliance Manager, by e-mail, facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14-days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the NRO Air Compliance Manager.
(9 VAC 5-20-180 C)

1. The emission units that have continuous monitors subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not subject to the two week written notification.

2. The emission units subject to the reporting and the procedure requirements of 9 VAC 5-40-50 C and the procedures of 9 VAC 5-50-50 C are listed below:

   a. Unit #3 (ID# ES-3)
   b. Unit #4 (ID# ES-4)
   c. Unit #5 (ID# ES-5)
   d. Unit #6A (ID# ES-13)
   e. Unit #6B (ID# ES-14)

3. Each owner required to install a continuous monitoring system subject to 9 VAC 5-40-41 or 9 VAC 5-50-410 shall submit a written report of excess

emissions (as defined in the applicable emission standard) to the board for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information:

a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9 VAC 5-40-41 B 6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

4. All emission units not subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C must make written reports within 14 days of the malfunction occurrence.
(9 VAC 5-20-180 C, 9 VAC 5-40-50, and 9 VAC 5-50-50)

## G. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-490 G.1)

## H. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
(9 VAC 5-80-490 G.2)

## I. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-490 G.3)

## J. Permit Modification

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-490 G and L, 9 VAC 5-80-550 and 9 VAC 5-80-660)

## K. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-490 G.5)

## L. Duty to Submit Information

1. The permittee shall furnish to the board, within a reasonable time, any information that the board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the board along with a claim of confidentiality.
(9 VAC 5-80-490 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-430 G.9.
(9 VAC 5-80-490 K.1)

## M. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-360 through 9 VAC 5-80-700 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 et seq. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.
(9 VAC 5-80-490 H)

## N. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited, to the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;

4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and

5. The prompt removal of spilled or traced dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-20 E, 9 VAC 5-50-90, and 9 VAC 5-50-50)

## O. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-40-20 E, and 9 VAC 5-50-20 E)

## P. Alternative Operating Scenarios

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-500 shall extend to all terms and

conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80 Article 3.
(9 VAC 5-80-490 J)

## Q. Inspection and Entry Requirements

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-490 K.2)

## R. Reopening For Cause

The permit shall be reopened by the board if additional federal requirements become applicable to a major source with a remaining permit term of three or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-430 F.

1. The permit shall be reopened if the board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

2. The permit shall be reopened if the administrator or the board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

3. The permit shall not be reopened by the board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-490 D.
(9 VAC 5-80-490 L)

## S. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-510 G)

## T. Transfer of Permits

1. No person shall transfer a permit from one location to another or from one piece of equipment to another.
(9 VAC 5-80-520)

2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-560.
(9 VAC 5-80-520)

3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-560.
(9 VAC 5-80-520)

## U. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of Condition VIII.U.2 are met.

2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

   a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.

   b. The permitted facility was at the time being properly operated.

   c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

   d. The permittee notified the board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may

be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-490 F.2.b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any requirement applicable to the source.

4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.
(9 VAC 5-80-650)

## V. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 3. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any of the grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-490 G & L, 9 VAC 5-80-640 and 9 VAC 5-80-660)

## W. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submits such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-430 E)

## X. Stratospheric Ozone Protection

If the permittee handles or emits one or more Class I or II substance subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A - F)

## Y. Asbestos Requirements

The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9 VAC 5-60-70 and 9 VAC 5-80-490 A)

## Z. Accidental Release Prevention

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

## AA. Changes to Permits for Emissions Trading

No permit revision shall be required, under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-490 I)

## BB. Emissions Trading

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-490 except subsection N shall be included to determine compliance.

2. The permit shield described in 9 VAC 5-80-500 shall extend to all terms and conditions that allow such increases and decreases in emissions.

3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-360 through 9 VAC 5-80-700.
(9 VAC 5-80-490 I)

## CC. Temporary Suspension of Enforcement

Per VA Air Pollution Control Law, Title 10.1, Chapter 13 Section 1307.3(5), the permittee may request the Executive Director or his duly authorized representative to temporarily suspend the enforcement of any regulation or permit requirement applicable to any part of an electrical generation and transmission system, when a

public electric utility providing power within the Commonwealth so requests and has suffered a force majeure event as defined in subdivision 7 of section 59.1-21-18:2, (i.e., *force majeure* means an act of God or any other cause not reasonably within the control of the supplier.)
(VA Air Pollution Control Law, Title 10.1, Chapter 13 Section 1307.3(5))

## IX. Title IV Permit Allowances and Requirements

### A. Statutory and Regulatory Authorities

In accordance with the Air Pollution Control Law of Virginia §10.1-1308 and §10.1-1322, the Environmental Protection Agency (EPA) Final Full Approval of the Operating Permits Program (Titles IV and V) published in the Federal Register December 4, 2001, Volume 66, Number 233, Rules and Regulations, Pages 62961-62967 and effective November 30, 2001, and Title 40, the Code of Federal Regulations §§72.1 through 76.16, the Commonwealth of Virginia Department of Environmental Quality issues this permit pursuant to 9 VAC 5 Chapter 80, Article 3 of the Virginia Regulations for the Control and Abatement of Air Pollution (Federal Operating Permit Article 3).
(9 VAC 5-80-490 B.2)

### B. $SO_2$ Allowance Allocations and NOx Requirements for affected units
(9 VAC 5-80-490 A.4)

| | | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| Unit 3 | $SO_2$ allowances, under Table 2, 40 CFR Part 73. (tons) | 2253 tons per year | 2253 tons per year | 2253 tons per year | 2253 tons per year | 2253 tons per year |
| | NOx limit | Pursuant to 40 CFR 76.11, the Commonwealth of Virginia Department of Environmental Quality approves a NOx emission averaging plan for unit 3, effective for calendar year 2015 through calendar year 2019. Under the plan, this unit's NOx emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.35 lb./MMBtu. In addition, this unit shall not have an annual heat input less than 270,000 MMBtu. Under the plan, the actual Btu-weighted annual average NOx emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they been operated, during the same period of time, under the applicable emissions limitations under 40 CFR §§76.5, 76.6, or 76.7, except that for early election units, the applicable emission limitations shall be under §76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR §76.11(d)(1)(ii)(A)) is met for a year under the plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.<br>In addition to the described NOx compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76 including the duty to reapply for a NOx compliance plan, and requirements covering excess emissions. | | | | |

Note: See Subsection C.2.a

| | | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| Unit 4 | $SO_2$ allowances, under Table 2, 40 CFR Part 73. (tons) | 6736 tons per year | 6736 tons per year | 6736 tons per year | 6736 tons per year | 6736 tons per year |
| | NOx limit | Pursuant to 40 CFR 76.11, the Commonwealth of Virginia Department of Environmental Quality approves a NOx emission averaging plan for unit 4, effective for calendar year 2015 through calendar year 2019. Under the plan, this unit's NOx emissions shall not exceed the annual average alternative contemporaneous emission limitation (ACEL) of 0.35 lb./MMBtu. In addition, this unit shall not have an annual heat input less than 625,000 MMBtu. Under the plan, the actual Btu-weighted annual average NOx emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NOx emission rate for the same units had they been operated, during the same period of time, under the applicable emissions limitations under 40 CFR §§76.5, 76.6, or 76.7, except that for early election units, the applicable emission limitations shall be under §76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR §76.11(d)(1)(ii)(A)) is met for a year under the plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit.<br>In addition to the described NOx compliance plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76 including the duty to reapply for a NOx compliance plan, and requirements covering excess emissions. | | | | |

Note: See Subsection C.2.a.

| | | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| Unit 5 | $SO_2$ allowances, under Table 2, 40 CFR Part 73. (tons) | 4343 tons per year | 4343 tons per year | 4343 tons per year | 4343 tons per year | 4343 tons per year |

Note: See Subsection C.2.a.

| | | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| Unit 6A | $SO_2$ allowances, under Table 2, 40 CFR Part 73. (tons) | None | None | None | None | None |

Note: See subsection C.2.b.

| | | | | | | |
|---|---|---|---|---|---|---|
| Unit 6B | $SO_2$ allowances, under Table 2, 40 CFR Part 73. (tons) | None | None | None | None | None |

Note: See subsection C.2.b.

## C. Additional Requirements, Notes, Comments, and Justifications.

### 1. Additional Requirements:

Virginia Electric and Power Company shall submit a complete permit application that includes all of the information required under 40 CFR §§72.21 and 72.31 and includes a complete NOx compliance plan in accordance with 40 CFR §76.9(c) at least 6 months, but no earlier than 18 months, prior to the date of expiration of the existing Phase II Acid Rain permit. EPA forms shall be used.
(9 VAC 5-80-430 C.5)

### 2. Notes:

a. $SO_2$ allowances may be acquired from other sources in addition to those allocated by U.S. EPA. No revision to this permit is necessary in order for the owners and operators of this unit to hold additional allowances recorded in accordance with 40 CFR Part 73. The owners and operators of this unit remain obligated to hold sufficient allowances to account for $SO_2$ emissions from this unit in accordance with 40 CFR 72.9(c)(1).
(9 VAC 5-80-420 C.1 and H.1 and 9 VAC 5-80-490 O)

b. Units 6A and 6B and the six simple-cycle combustion turbines constructed prior to 1990 (Units 6, 7, 8, 9 , 10 and 11) at the Possum Point Power Station are not eligible for $SO_2$ allowance allocation by U.S. EPA under Section 405 of the Clean Air Act and the Acid Rain Program, so none were assigned in 40 CFR Part 73, Table 2. .
(9 VAC 5-80-420 C.6)

c. The Title IV Acid Rain permit application submitted in accordance with 40 CFR 72.31, as approved or adjusted by the DEQ, is attached, along with the Phase-II NOx Compliance Plan and Phase II NOx Averaging Plan, as Appendix D.

## 3. Comments:

a. Although units 6A and 6B and the six simple-cycle combustion turbines constructed prior to 1990 (Units 6, 7, 8, 9 , 10 and 11) were not assigned $SO_2$ allowances under the Acid Rain Program they are subject to other (non-Acid Rain Program) sulfur dioxide limitations found in Section III of this permit

b. Units 1 and 2, which were listed in previous Acid Rain permits for the Possum Point Power Station, were permanently shut down in 2002, and therefore are not listed in this permit.

## 4. Justifications:

a. Units 5 and 6A and 6B are gas-fired or oil-fired units and are not subject to NOx limitations under 40 CFR Part 76.
(9 VAC 5-80-420 D)

b. Heat recovered from Units 6A and 6B powers a heat recovery steam generator. The heat recovery steam generator is not equipped with any fuel firing capabilities, and is therefore not subject to acid rain requirements under 40 CFR Parts 72 through 76.
(9 VAC 5-80-420 D

## X. Cross-State Air Pollution Rule (CSAPR)

The permittee shall comply with all applicable cross-state air pollution rule (CSAPR) requirements (40 CFR Part 97, Subparts AAAAA-DDDDD) by the compliance date specified in 40 CFR 97, Subparts AAAAA-DDDDD, as amended
(40 CFR Part 97, Subparts AAAAA-DDDDD and 9 VAC 5-80-110)

## XI. State-Only Enforceable Requirements

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-690 concerning review of proposed permits by EPA and draft permits by affected states.
(9 VAC 5-80-490 N and 9 VAC 5-80-700)

### A. Limitations

Emissions from the operation of each GE 7FA combustion turbine and its associated duct burners (DB's) shall not exceed the limits specified below:

| | |
|---|---|
| Acrolein | 6.4 x 10-6 lbs/MMBtu |
| Cadmium | 4.8 x 10-6 lbs/MMBtu |
| Chromium | 1.1 x 10-5 lbs/MMBtu |
| Manganese | 7.9 x 10-4 lbs/MMBtu |

All emission limits represent averages for a three-hour sampling period.
(Condition 64 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

### B. Compliance

The emissions from the operation of each GE 7FA combustion turbine may be presumed to be in compliance with the limits of Condition XI.A., so long as the units are in compliance with the PM-10 limits and the fuel type requirement of Conditions III.Q.6 and III.Q.3, respectively, of the federally enforceable section of this permit. If the units are found not to be in compliance with those requirements or there is other probable cause to suspect noncompliance with the limits of Condition XI.A., DEQ may request that stack emissions tests be conducted to determine compliance with the limits of Condition XI.A. The methods for testing to meet this condition are to be agreed to by the NRO Air Compliance Manager.
(Condition 65 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

### C. Recordkeeping

The permittee shall keep a log of the hours and purpose of operation of the the diesel engine powering the fire pump (ID ES-20). It shall be formatted such that total hours of operation for each purpose of operation can readily be determined for the most recent twelve months for the purpose of, but not limited to, demonstrating that the engine meets the definition of an emergency stationary RICE or a limited use RICE as defined at 40 CFR §63.6675.
(9 VAC 5-40-50)

## D. Reporting

The format for reporting the results of testing, if and when required to determine the emission rate of toxic pollutants in Condition XI.A., shall be arranged with the NRO Air Compliance Manager.
(Condition 66 of 10/05/01 (last amended 3/20/15) PSD/Non-attainment Permit)

## E. General

1. Except for accidental or infrequent odor, if the facility emits odor the provisions of 9 VAC Chapter 40, Part II, Article 2, Emission Standards for Odor (Rule 4-2) apply.
(9 VAC 5-40-130)

2. Except as provided in 9 VAC 5-60-200 C,D, and E, and 9 VAC 5-60-300 C,D, and E, if the facility emits or may emit any toxic pollutant (defined at 9 VAC 5-60-210 and 9 VAC 5-60-310) the provisions of 9 VAC Chapter 60, Part II, Articles 4 and 5, Emissions Standards for Toxic Pollutants from Existing Sources (Rule 6-4) and Emission Standards for Toxic Pollutants from New and Modified Sources (Rule 6-5), respectively, apply.
(9 VAC 5-60-200 and 9 VAC 5-60-300)

Appendix A

Possum Point Combined Cycle
GE 7FA Combustion Turbines (Units 6A & 6B)
Startup and Shutdown Definitions

**Startup is one of the three following types of start conditions, as applicable:**

Cold Start

- A cold start is defined as the process of commencing ignition of fuel in the combustion turbine after no fuel has been burned for a period of forty-eight (48) hours or greater. The period of time (commencing with the ignition of the fuel) required to place the turbine in service at minimum load is five (5) hours.

Warm Start

- A warm start is defined as the process of commencing ignition of fuel in the combustion turbine after no fuel has been burned for a period greater than eight (8) hours and less than forty-eight (48) hours. The period of time (commencing with the ignition of the fuel) required to place the turbine in service at minimum load is four (4) hours.

Hot Start

- A hot start is defined as the process of commencing ignition of fuel in the combustion turbine after no fuel has been burned for a period lasting less than eight (8) hours. The period of time (commencing with the ignition of the fuel) required to place the turbine in service at minimum load is three (3) hours. A hot start is also defined as when the unit reduces load and switches from operation on one fuel to operation on another fuel and shall last no more than three (3) hours.

**Shutdown is the following type of shutdown process:**

Planned Shutdown

- A shutdown is defined as the process of suspending the ignition of fuel in the combustion turbine for the purpose of removing the unit from service. A typical shutdown while operating at minimum load will see the combustion turbine operating below minimum load for less than one hour until the fuel supply is shut off. For purposes of determining compliance, a shutdown is the period of time required to remove the turbine from service and is one (1) hour excluding partial operating hours.